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Volume 48

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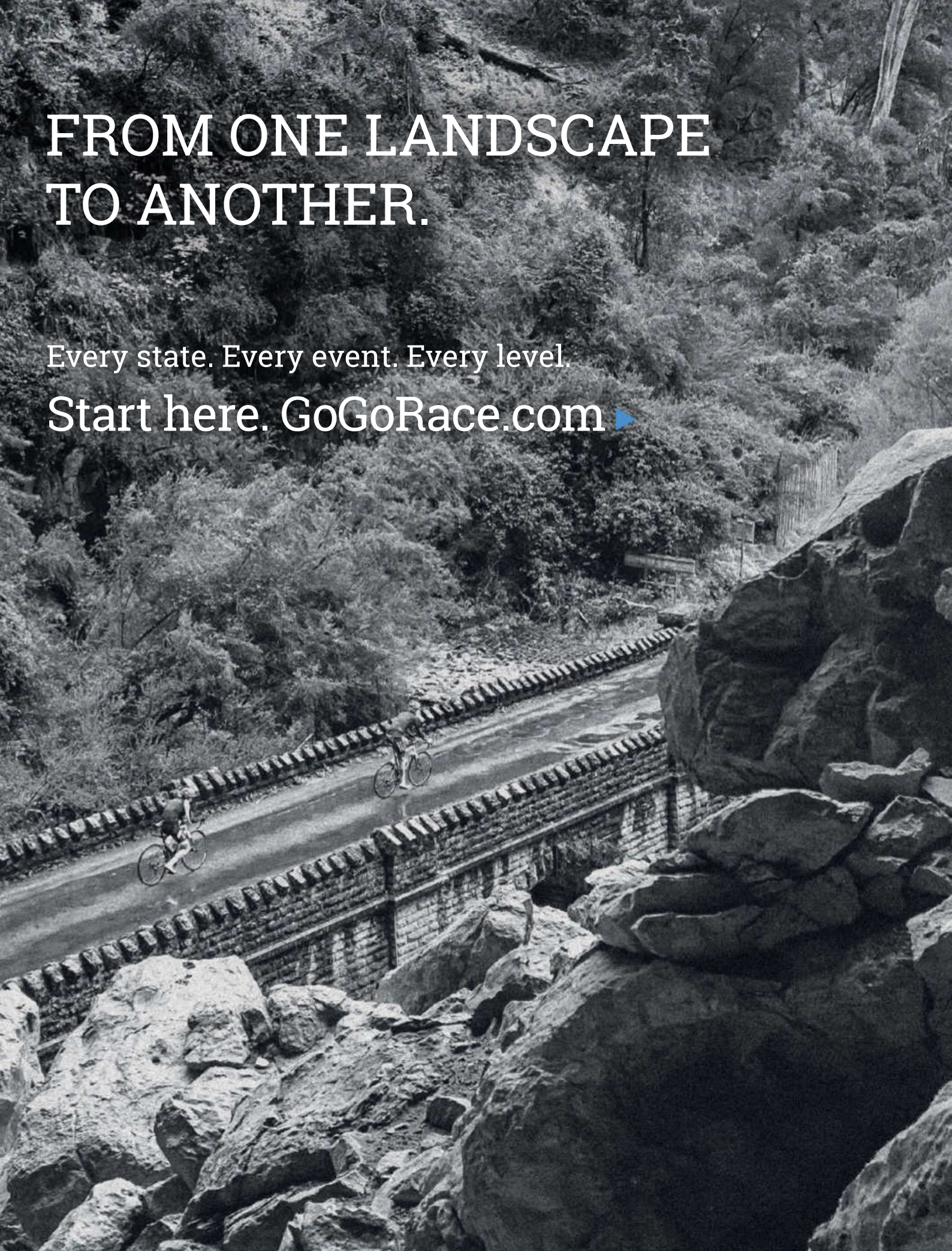
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Dominic Dowling (02) 9186 9135

MANAGEMENT

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FINANCIAL CONTROLLER

Stuart Harle

EDITORIAL DIRECTOR

Richard Ryan

PRODUCTION MANAGER

Ian Scott

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"Fresh Faced" featuring Sian Robertson, pg 14



I WAS INVITED, many years ago, to the launch of an early iteration of the Canon IXUS – a point-and-shoot camera that has been made virtually redundant by modern smartphones. It was during an era when, perhaps out of a desperation to compete with said phones, all new cameras were being crammed with special effects capabilities and “scene” modes – one of which was Colour Popping, the ability to select a single colour and knock out all others. Enticed by the chance to win a new IXUS, everyone at the launch was sent out onto Bondi Beach for a 20-minute photo comp. I flicked into Colour Popping mode – the only time I’ve ever contemplated using the technique – and snapped a shot of a huge Mickey Mouse graffiti mural that ran for metres along the Bondi seawall, making everything black and white except for Mickey’s deep red shorts.

Even though it was (and is) a twee effect, it was enough to win the day and a new camera – and just goes to show how important and impactful the use of colour is in photography. You can learn all about Colour Popping (and hopefully how to quickly move on from Colour Popping) in our Ultimate Guide to Colour, beginning on page 42. Keep up the great shooting!

Greg Barton Editor

ON THIS ISSUE'S COVER...

Our stunning cover image for this issue is by up and coming fashion photographer Sian Robertson. You can read more about the UK-based photographer – who hasn’t ruled out becoming a wildlife shooter one day – in her “Fresh Faced” article beginning on page 14.



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Three photographers, one image, three different techniques. Uncover the secrets of a professional's workflow.





CONTRIBUTING THIS ISSUE...



Sian Robertson FASHION

UK fashion and portrait photographer Sian Robertson brings a fresh-faced approach to her work – find more beginning on page 14, and of course at sianrobertson.com



Shanx Bose PHOTOSHOP

Canberra's Shanx Bose (Max Photography) hot-foots it to Sydney for one of his best captures (and clinics) ever. Don't miss it on page 24. facebook.com/maxphotography.au



Ray Demski ADVENTURE

A multi-award-winning action and adventure photographer with a client list that puts most to shame. Ray shares his story on page 30. raydemski.com



Tyler Stableford COMMERCIAL

Known as one of the world's best adventure photographers, no idea is too far fetched or project too big, as you'll find out on page 36. stablefordstudios.com



Daniel Lezano

With more than 30 years of experience as an enthusiast photographer and almost 20 years on photo magazines, Daniel is as passionate as ever about photography, portraits in particular.



Caroline Schmidt PORTRAITS

A Photoshop expert and experienced magazine journalist and deputy editor, Caroline specialises in portraiture. carolineanphotography.co.uk



Ross Hoddinott LANDSCAPES

He's not only an award-winning nature photographer, a leading expert in landscape and wildlife photography, he's a top tutor, too. rosshoddinott.co.uk



Lee Frost LANDSCAPE & REVIEWS

A long-standing regular contributor, Lee is a fountain of knowledge when it comes to shooting landscapes and delivering expert tutorials. leefrost.co.uk



Jordan Butters LANDSCAPES & REVIEWS

With a finger always on the pulse of photography, Jordan turns his hand to most things; he's a senior features writer and talented pro photographer.



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Portfolio

Eternity

by Jatenipat Ketpredit

500px.com/Jkboy_Jatenipat

"While I was in Torres del Paine National Park in the Patagonian region of Chile, I looked for a new perspective of this famous mountain, Los Cuernos, which translates into 'the horns'. This little stream attracted me but, as at first the mountain was covered by clouds, I had to wait for two hours until it cleared to reveal this beautiful view."

Nikon D810 with NIKKOR AF-S 16-35mm f/4G ED VR lens.
Exposure: 1/5sec at f/16 (ISO 100).





Frozen Throne by Jatenipat Ketpredit

500px.com/Jkboy_Jatenipat

(Above) "After a storm, this entire area was covered by fresh snow. The waterfall in the foreground was nearly frozen solid. I was visiting Iceland and knew I had to shoot the famous Kirkjufell before I left. Fortunately, I was presented with a beautiful sky that helped me create a different shot from others I'd seen of this location."

Nikon D800E with AF-S16-35mm f/4G lens. Exposure: One second at f/16 (ISO 100).

Castle of Darkness by Jatenipat Ketpredit

(Centre left) "I stopped my car at a petrol station near the village of Vik in Iceland to find a nice view to shoot. The sky had been brooding all day when suddenly the cloud broke just enough to let a slither of dramatic light through. I grabbed my camera, jumped out of the car and quickly took this shot before the light was gone."

Nikon D800E with AF-S24-70mm f/2.8G lens. Exposure: 1/2sec at f/18 (ISO 100).

Divinity by Jatenipat Ketpredit

(Below left) "This was taken at Los Glaciares National Park in Santa Cruz Province, Argentina. I was trekking from El Chalten to Laguna Torre when I found this stream near Cerro Torre. I thought that this landscape would be fantastic at sunrise, so I made a base and camped out for the night. The results did not disappoint me."

Nikon D810 with AF-S16-35mm f/4G lens. Exposure: 1/8sec at f/16 (ISO 100).

Gorgeous Red Head by Thom H

500px.com/Thomh

(Right) "This image was taken in my studio in Paris, against a grey seamless paper background. I used a Sekonic flash meter to obtain the right exposure and camera settings. Rather than use a burst of flash, my model, Aurélie, was instead lit by the modelling light from a single studio flash inside a 70cm beauty dish, with a reflector below for fill."

Nikon D4 with NIKKOR AF-S85mm f/1.4G lens. Exposure: 1/125sec at f/2 (ISO 250).







Butterfly Garden by Samantha Goss

www.facebook.com/SamanthaGossPhoto

(Top left) "This image took a year to plan and execute because of the different elements involved. The tide mattered the most because at this location you can't walk on the beach at high tide. I wanted to shoot in flat lighting with a low tide so watched the moon's cycles to predict when and what times the tide would be low for the image."

Canon EOS7D with Canon EF 28-135mm f/3.5-5.6 IS USM lens. Exposure: 1/200sec at f/5.6 (ISO 200).

Façade by Samantha Goss

(Above left) "The concept behind this image came from observing the actions and emotions that people hide everyday. Are you someone who can swim without the mask you're hiding behind? This was shot in a swimming pool using an underwater housing and was a real challenge as posing was difficult. After much persistence and effort, we finally managed to capture an image that told a story."

Canon EOS7D with Canon EF 28-135mm f/3.5-5.6 IS USM lens. Exposure: 1/160sec at f/5.6 (ISO 400).

Imaginary by Samantha Goss

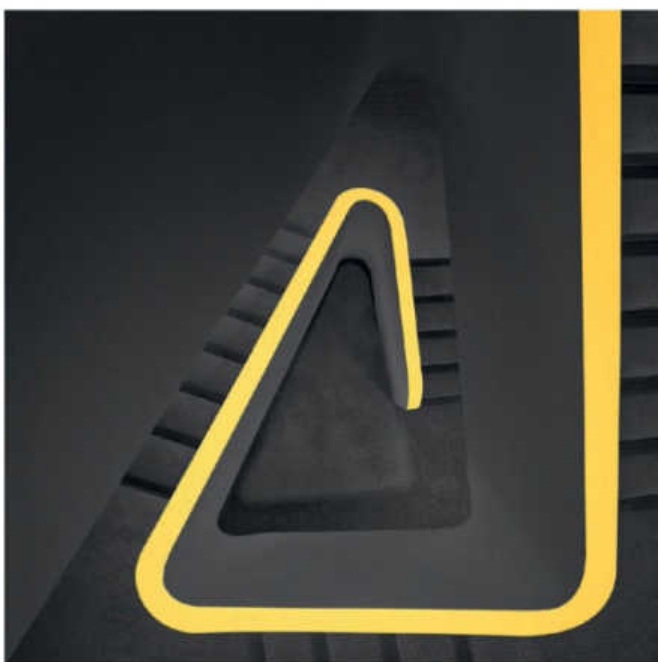
(Top right) "This image is based on one of my favourite songs from my childhood by Amy Lee. Unfortunately, depression is something I've dealt with my whole life. This song represents wanting to get away into my own world. I found a piece of empty land where the sun sat behind the tree line, and took these handmade paper roses I'd been working on for months. It came together exactly how I wanted."

Canon EOS7D with Canon EF 28-135mm f/3.5-5.6 IS USM lens. Exposure: 1/100sec at f/5 (ISO 250).

Guiding Love by Samantha Goss

(Above right) "This ended up being a lot more romantic than intended. What was originally supposed to be an image about deceitful love, turned into a story about trust. It was freezing and raining as the sun was setting. My wireless remote malfunctioned and this was the only shot we got. Though it was miserable, we laughed a lot and it made us feel alive. This image reminds me of an unforgettable experience."

Canon EOS 6D with Canon EF 28-135mm f/3.5-5.6 IS USM lens. Exposure: 1/160sec at f/5.6 (ISO 250).



Spiral by Markus Studtmann

www.paintingwithlight.de

(Top) "This is the central staircase of a German library, which usually stands out for its strong pink and green hues. I originally intended a central view straight from above, but as I experimented with angles I found this perspective, holding the camera over the bannister and shooting blind. I converted it to black & white to highlight the spiral."

Ricoh GR with 18.3mm f/2.8 fixed lens. Exposure: 1/40sec at f/4 (ISO 560).

Follow the line by Markus Studtmann

(Above) "This image started out as a shot of a staircase that was painted mostly white and had very low contrast. The staircase descends many floors, but I decided to keep my composition simple and focus on the lowest two floors only. The most interesting shape for me was the top of the handrail, which I coloured yellow in post-processing before darkening the rest of the scene to give it a contrasting background."

Ricoh GR with 18.3mm f/2.8 fixed lens. Exposure: 1/40sec at f/4 (ISO 400).

Circles by Markus Studtmann

(Top) "I shot this in the atrium of an office building in Hamburg. Fascinated by the circular arrangement, I initially tried to capture the structure from the middle, but wasn't able to reach out that far. I then tried the cascade-like arrangement you see here. The real challenge was dodging and burning the floor on each level to get a more uniform look. The dynamic range of the Ricoh GR helped here."

Ricoh GR with 18.3mm f/2.8 fixed lens. Exposure: 1/40sec at f/2.8 (ISO 400).

Into the blue by Markus Studtmann

(Above) "This image is part of a series of quadrangle courtyards. This is an interesting building that I found in Berlin. I revisited twice, because I sought a clear blue sky and no shadows. To get this angle of view, I put my camera with an ultra wide-angle lens on the ground and used a remote control in order to stay out of the image. In post-processing I mirrored some parts of the front to get a more symmetrical look."

Canon EOS 5D Mk II with Canon EF 17mm f/4L TS-E lens. Exposure: 1/60sec at f/11 (ISO 100).

Flight Of The King by Rob Cross

www.robcimages.co.uk

(Right) "Kingfishers are my favourite bird, and whilst I have thousands of perched shots I really wanted an action image. This bird was a creature of habit, and watching him often gave me an understanding of how he behaved, which helped me capture this image."

Canon EOS-1D Mk IV with Canon EF 300mm f/2.8L IS lens. Exposure: 1/6400sec at f/5 (ISO 640).

Landing Gear Down by Rob Cross

(Below left) "I wanted to capture an image with an owl just about to land, but struggled to get the image I envisioned. I had to push up the ISO and shoot wide open to achieve a fast enough shutter speed given the lack of light. It wasn't ideal, but I was happy to finally get the shot!"

Canon EOS-1D Mk IV with Canon EF 300mm f/2.8L IS lens. Exposure: 1/3000sec at f/2.8 (ISO 3200).

Going Underground by Rob Cross

(Below right) "Skomer is great for seabirds and the puffins in particular are very photogenic! I could not pass up this chance of a puffin in its nest burrow. The bird would occasionally pop its head out and I had to get down really low to the ground to capture this image."

Canon 1D Mk IV with Canon EF 300mm f/2.8L IS lens. Exposure: 1/200sec at f/8 (ISO 500).

Sunrise Stag by Rob Cross

(Bottom centre right) "I travelled to Richmond Park in London to see the red deer rut. I wanted a silhouette amongst the trees, unfortunately the light was perfect but no stags were nearby. All of a sudden a lone stag strolled in, bellowing. Everything came together just right."

Canon EOS-1D Mk IV with Canon EF 300mm f/2.8L IS lens. Exposure: 1/1600sec at f/8 (ISO 800).

Lying Low by Rob Cross

(Bottom far right) "I spent quite a long time watching this mountain hare who was very accommodating and comfortable in my presence. Using sensible field craft and respecting this wild animal, allowing it to act naturally, gave me a lot of satisfaction when shooting this image."

Canon EOS-1D Mk IV with EF 300mm f/2.8L lens and 2x teleconverter. Exposure: 1/320sec at f/8 (ISO 400).





Fresh faced

With an impressive and growing portfolio in fashion and portraiture, the UK's Sian Robertson has turned five short years as a professional photographer into a flourishing career. Here she discusses an increasingly tough industry, her source of inspiration, and the importance of passion.





Shot with a Canon 5DMkIII; 70-200mm lens; 1/160sec; f/13; ISO 100; focal length 200mm

I'm nearly 30 years old and grew up in Twickenham in the UK – so I love rugby, but support Wales, not England, since my grandparents are Welsh. I'm currently based in Northumberland in the North East of England, which was thanks to my husband, who moved us here for his work. However... I love it here! Being able to walk on the beach every day with the dogs is a dream come true.

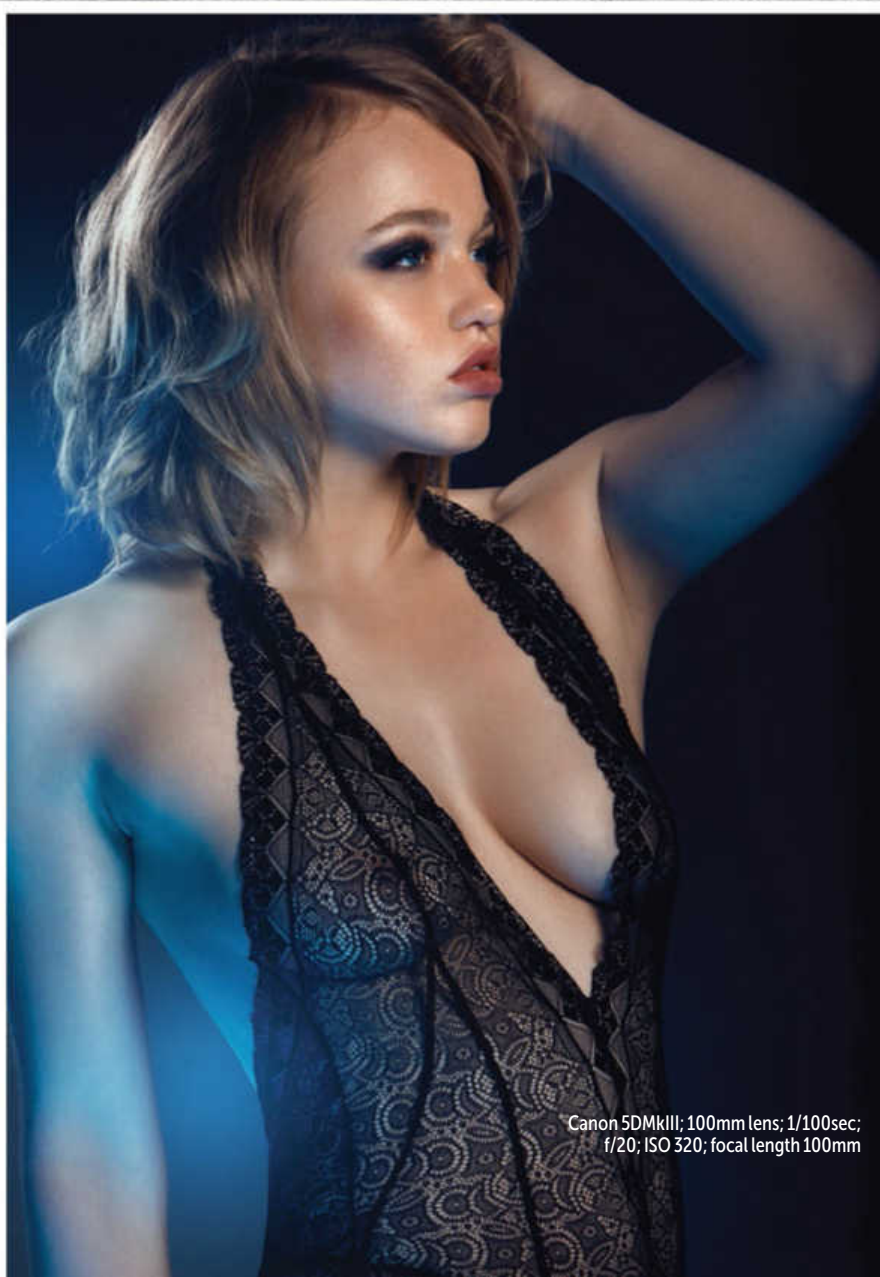
When I'm not taking photos I'm editing, making videos, planning for shoots, organising my business – oh, and I have the occasional sing song, which I'm sure drives the neighbours crazy, but they are too polite to say.

I travelled the world after studying at university, which is why I decided to buy a DSLR – the Canon 400D was my very first, which I loved deeply. I had the kit lens and a 70-300mm. I stupidly decided to put it in Manual mode and learned from there, but I did get some shots that I thought were pretty amazing and that's what made me think it could be a career move.

Self development and inspiration

I've never had any training whatsoever in photography, although I would have loved to have attended some courses. I did second-shoot at weddings at the beginning, before quickly going it alone, and then I progressed onto portraits, which is when the beauty and fashion aspect came into it.

I think we all continuously learn if we open ourselves up to it and that inspiration can come from everywhere around us. I



Canon 5DMkIII; 100mm lens; 1/100sec; f/20; ISO 320; focal length 100mm



Canon 5D MkIII; 24-70mm lens; 1/800sec;
f/2.8; ISO 320; focal length 59mm



Canon 5DMkIII; 70-200mm
lens; 1/160sec; f/8; ISO 100;
focal length 70mm

“The one thing that keeps me going is my passion for photography. I’m in this for the love, not for the money”

Canon 5DMkIII; 70-200mm lens; 1/160sec; f/8; ISO 125; focal length 90mm

Sian’s Five Basics to Avoid

1. Hire out lenses or bodies before buying to save money.

For example, I know everyone swears by the “nifty fifty” (50mm lens) for portraits, but I hated it. I bought it because lots of people had said it was good, but I couldn’t get used to it. So, avoid buying on other people’s recommendations; it’s important to use equipment that you are comfortable with and that suits what you are photographing.

2. Don’t overcook photos in post.

When I started, I over-edited because I thought that’s what made the images look magazine-ready – but in fact it was the opposite. If editing isn’t your strong point, see if you can find a retoucher. Some retouchers just starting out look for images they can practice on, so it’s worth looking into.

3. Avoid going into debt. Gear is important, but practice is more so.

4. Don’t be nasty. Things have a way of turning full circle. Be nice and it will serve you better in this industry.

5. Don’t get disheartened! This industry is very tough and you need to be thick-skinned. I’ve had so many ups and downs and I am certain there will be more. The one thing that keeps me going is my passion for photography. I’m in this for the love, not for the money.

took a year out a couple of years ago to go back and study a Masters degree in Advertising, and then soon after I found myself doing creative work for various PR agencies. This helped me develop more as I was exposed to the media industry and strict deadlines and a very heavy workload.

Favourite style

When I first started out in photography, I always thought I would be a wildlife or travel photographer – I never expected to be drawn to portraiture. It’s funny how you have an idea of what you think you want to do, and then compare it to what you actually turn out doing. I love detail in people’s faces, the twinkle in people’s eyes, the frowns and grins in mouths – it fascinates me. I love the creative stuff too and when I have a make-up artist who is creative and adventurous, it makes the shoot exciting.

The process

My process is often shorter than I would like. I’ve always worked to tight deadlines and sometimes I will get a client wanting a full shoot in two day’s time. This would mean dedicating the time before that to organising hair, make-up, models,

wardrobe – if it isn’t supplied by the client – and so on. I love the rush of getting everything together but it can be stressful, especially if someone pulls out – on the day! Yes, that has happened and its been a nightmare – but it normally all comes together in the end.

On the day of the shoot, I am just myself. I’m not very strict unless we have a very very small window in which to shoot. I like my team to be relaxed; I let them choose the music and sometimes, if someone is nervous, I will be a little bit silly on set to make them feel at ease (although I won’t go into detail and embarrass myself!).

Depending on how well the shoot goes will determine whether the post-production side is easy or hard. If it went well, I will have a tough time narrowing down the shot selection process – but there are a couple of ways I choose. First is with my heart. Second is with my photographer (technical) head. That’s where it often ends up with two images almost identical but one is technically correct and the other might have the fingers cut off (in fashion anything goes – at camera clubs or comps, cutting off limbs at the wrong point is a big no-no!),

Sian Robertson

Canon 5DMkIII; 70-200mm lens; 1/200sec;
f/14; ISO 160; focal length 70mm



Canon 5DMkIII; 100mm lens;
1/160sec; f/8; ISO 100;
focal length 100mm



Sian's Five Must-dos of Portrait Photography

- 1. Talk to your subject** and build up a rapport to put them and you at ease.
- 2. Don't panic** if something isn't working. Stop for a minute, tell your subject to have a rest and think from the beginning about what you can change or improve.
- 3. Start simple.** Use one light only if you're in the studio. As you gain more confidence, build on it.
- 4. Research good poses** for your models so you can help direct them.
- 5. Have some fun!** Once you've got all of the must-have shots, go crazy and do something different! Sometimes mistakes are what make great photos. If it doesn't work out, it doesn't matter.

or part of the clothing or make-up might look wrong!

The future

I know that photography is something I can do for the rest of my life, even if it ends up being my hobby. And who knows? I may even end up being the wildlife photographer I always thought I was going to be – camouflage and all. For now, I intend to work as hard as I can, working with some amazing people and creating a large portfolio of memories.

For more of Sian's mesmerising portrait and fashion images, check out sianrobertson.com; [Facebook.com/SianRobertsonPhotographyPage](https://www.facebook.com/SianRobertsonPhotographyPage/); and [@sianrobertson](https://twitter.com/sianrobertson) on Twitter.

Canon 5DMkIII; 24-70mm lens; 1/800sec;
f/2.8; ISO 320; focal length 59mm





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Simple + Beautiful II

CANBERRA'S PHOTOSHOP PHENOM **SHANX BOSE** ONE-UPS HIS SPECTACULAR COMPOSITE FROM VOLUME 45 IN THIS SIMPLE, BEAUTIFUL – AND HIGHLY ADVANCED – SEQUEL.

The first Simple + Beautiful image we produced was quite a popular one so I decided to work on a second one – an image of gorgeous Canberra actress and model Shanie-Lee Smith. Our thanks also go out to Canberra's award-winning make-up artist Katie Saarikko, and Mary Brodbeck of Ferrari Formalwear and Bridal for providing the stunning dress that Shanie-Lee wears. We will look at how this image was created using

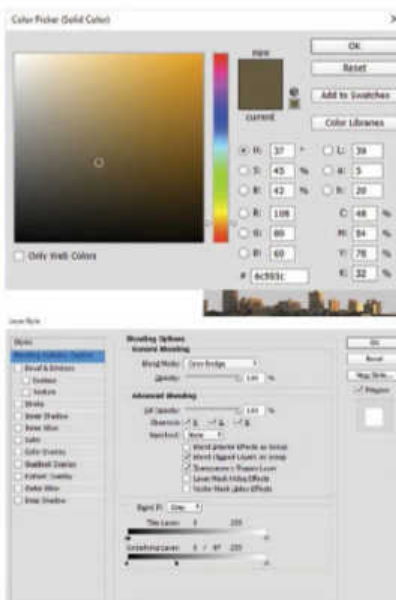
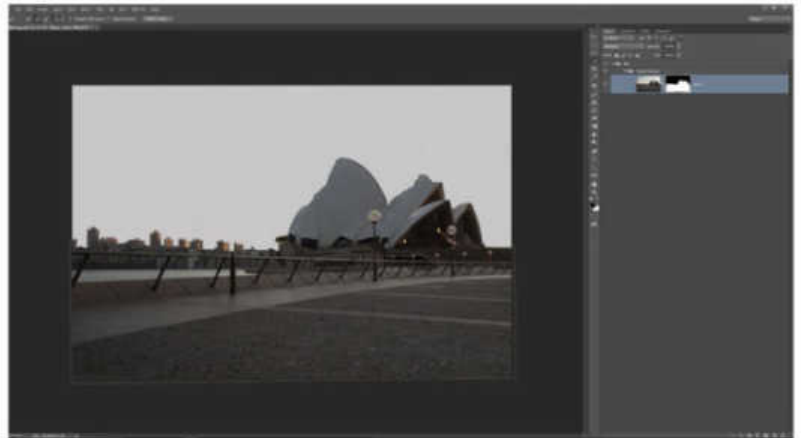
some advanced techniques such as "Blend-If".

The Sydney Opera House is such an iconic structure that it looks great in an image like this. I shot the image at around 5:30 in the morning, when I knew there would not be many people around and the light would be low. I deliberately used a very low angle so I could portray our model in a strong, yet delicate pose, as I would use the same perspective later in studio. So let's get right into it...



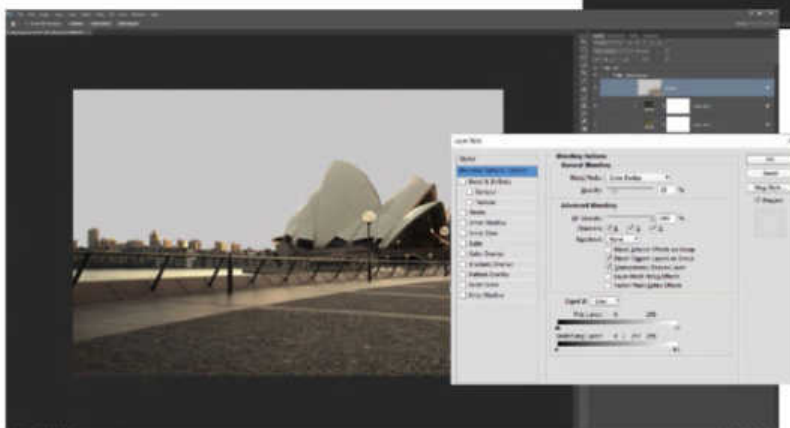
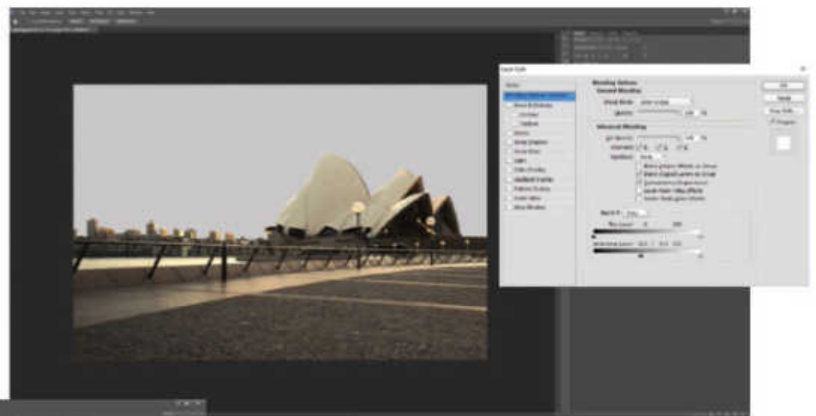
PREPARE THE BACKGROUND

1 Open the base image in Photoshop via Bridge. Make any adjustments while in Camera Raw if required. Using the quick selection tool, carefully mask out the edges of the Opera House and buildings in the background using a black brush. This image has nice clean lines, so it should be relatively easy to produce a clean mask. Where necessary, zoom in using CTRL + Num Pad (+) and clean up the mask. Paint the mask over the large street lamp in the middle to remove it – don't worry about the base of the lamp as we will place the model over it. Place the image in a group called Opera House (CTRL+G) and move that into another group called BG (for background) by CTRL+G again.



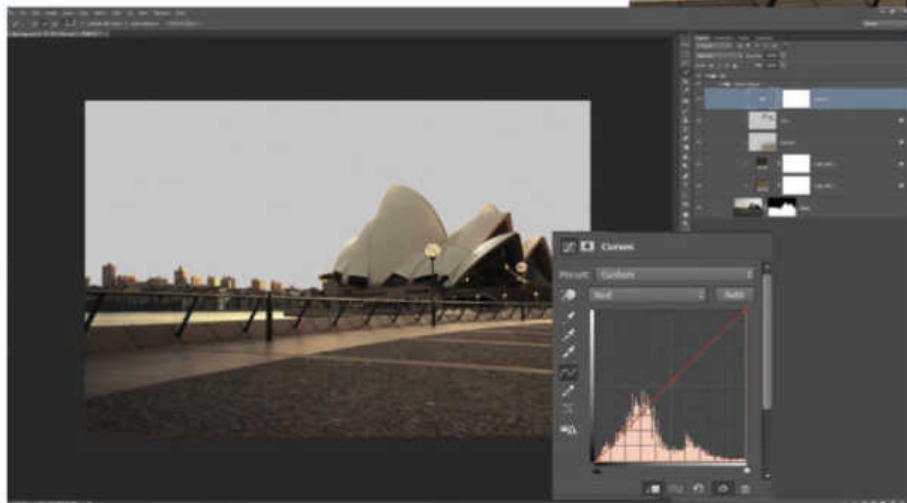
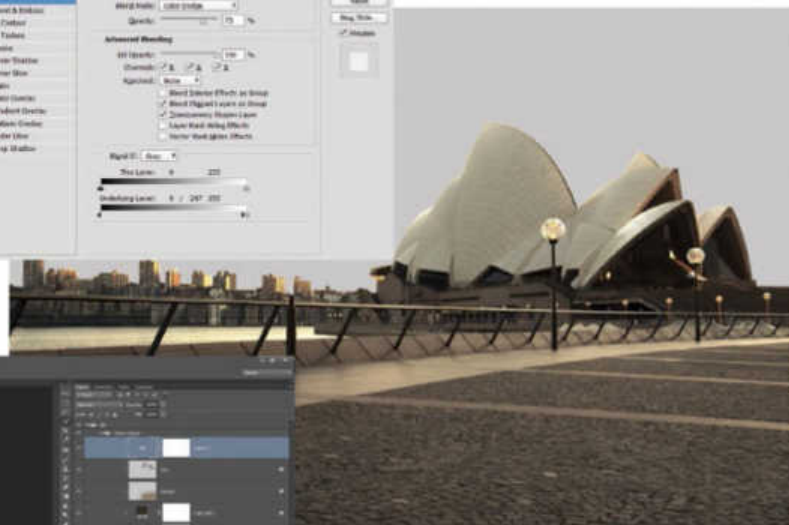
2 We're going for a golden yellow look with the palette. The sky colours we'll be bringing in later will mirror this, so let's adjust the image for this. Add a new Solid Colour adjustment layer and pick a darker shade of green-brown via the colour picker dialogue. Ensure it is clipped to the layer below by clicking CTRL+ALT+G. Set the blend mode of this layer to Colour Dodge (left, top). The whole image is affected but we want the majority of the effect to appear in the brighter areas of the image and not affect too much of the mid shadows. Double click the layer to bring up the layer properties dialogue (left, bottom). ALT+Left Click the leftmost black slider to split it. Move the slider to the right as shown.

3 Now let's target the highlights a bit more with a different colour. Repeat the process outlined in Step 2, but select a darker green colour. However this time when blending the colour via the layer properties, exclude the darker areas of the image by limiting the range the effect applies to. First move the shadow slider to mid-point, then split it for feathering the effect.



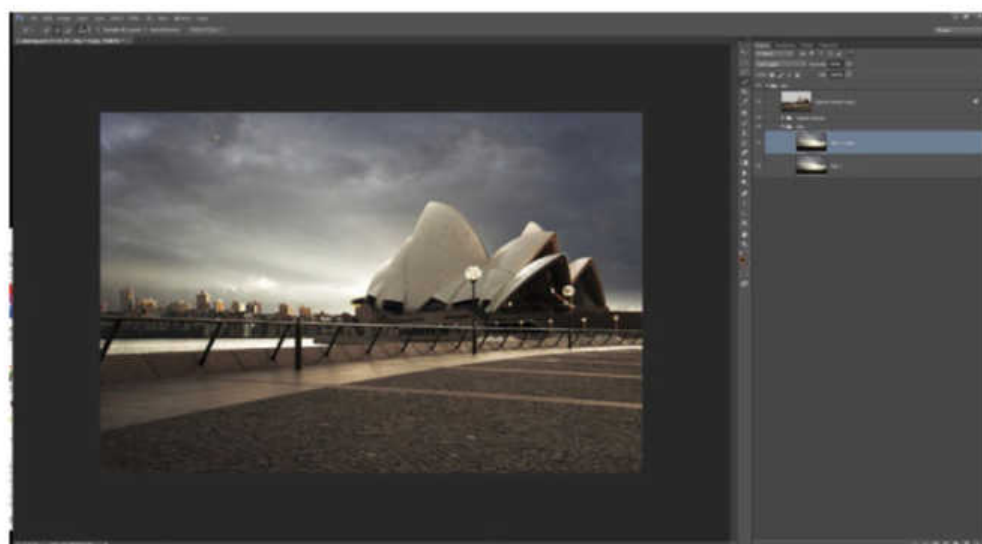
4 Let's add a bit more brightening and a surreal effect to the areas of the surface where the sun is hitting. Simply add an empty layer and ensure it is clipped to the layer below by clicking CTRL+ALT+G. Using a darker shade of brown similar to Step 2 and a soft brush, paint over part of the ground surface near the Opera House on the right. Set the layer blend mode to Colour Dodge. Next, use the same technique as above to isolate this effect to only the highlights. Bring up the layer properties by double clicking the layer. Split the black slider by ALT+ Left Click. Drag it to the right so it meets the highlights. This basically feathers the effect from shadows to highlights over the painted area.

5 Let's enhance the pointy tips of the Opera House. Add another empty layer and set the blend mode to Colour Dodge. Ensure it is clipped to the layer below by clicking CTRL+ALT+G. Using a darker shade of either blue or brown, paint over the tips. Use the layer blending mode trick as in the previous steps to isolate it to the highlights (ALT+ Left Click the black slider to split it, then drag the right part of the slider towards the highlights to feather the effect).



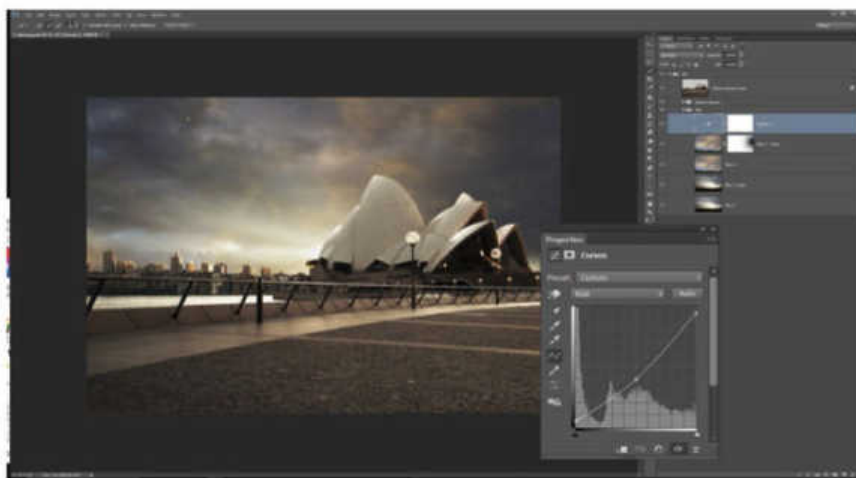
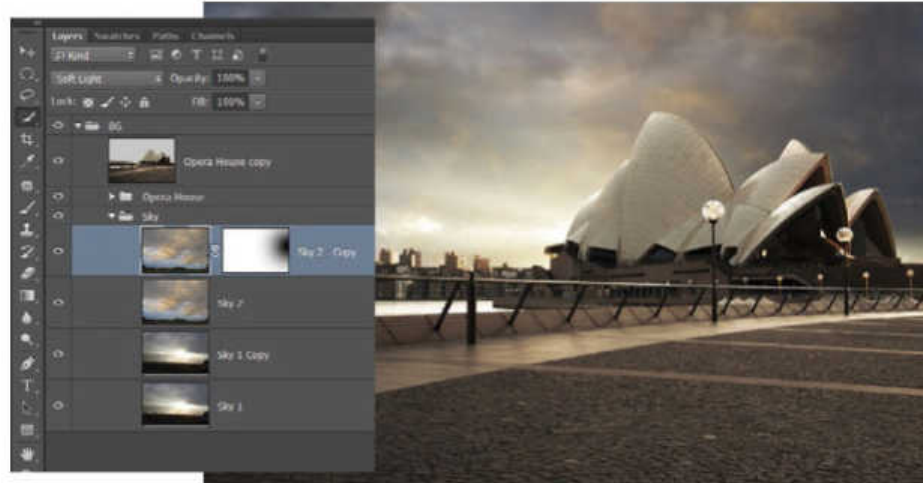
6 For a moody effect, add a curves adjustment layer and bring down the RGB mid tones by pulling down the middle part of the curve. Increase the Reds in the mid-tone range by selecting Red from the dropdown, bumping up the curve. Ensure it is clipped to the layer below by clicking CTRL+ALT+G.

7 Duplicate the Opera House group (select the group and press CTRL+J). Merge the resulting group by right clicking on the group and selecting "Merge Group" from the menu. Set the blend mode to Colour Dodge. Bring the up the layer properties and drag the black slider to mid-point to isolate the effect to only within the range. To reduce the grainy artefacts, further split drag the black slider and drag the right side all the way to the highlights.



8 Now let's bring in the sky images. You can use either your own skies or stock images (as I did). There are plenty of free sky images online or you can easily shoot your own at various points of the day. Put the sky image 1 into a group (CTRL+G) and rename the group to Sky. Ensure the group appears below the Opera House group so the Sky Group shows through the mask we created. In the Sky Group, duplicate the sky image (select it and CTRL+J). Set the blend mode of the top layer to Soft Light and leave it at an opacity of 55%.

9 Bring in the sky image 2 and duplicate it as well (CTRL+J). Leave both layers at Soft Light blending mode, at 100% opacity. Add a mask to the topmost sky layer, and mask away some of the darker areas of the sky on the right using a large soft black brush.



10 For even more drama, add a Curves adjustment layer and darken the mid-tones by dragging the curve downwards from the middle. We're done with the background!

CONTINUE WORK ON THE FOREGROUND

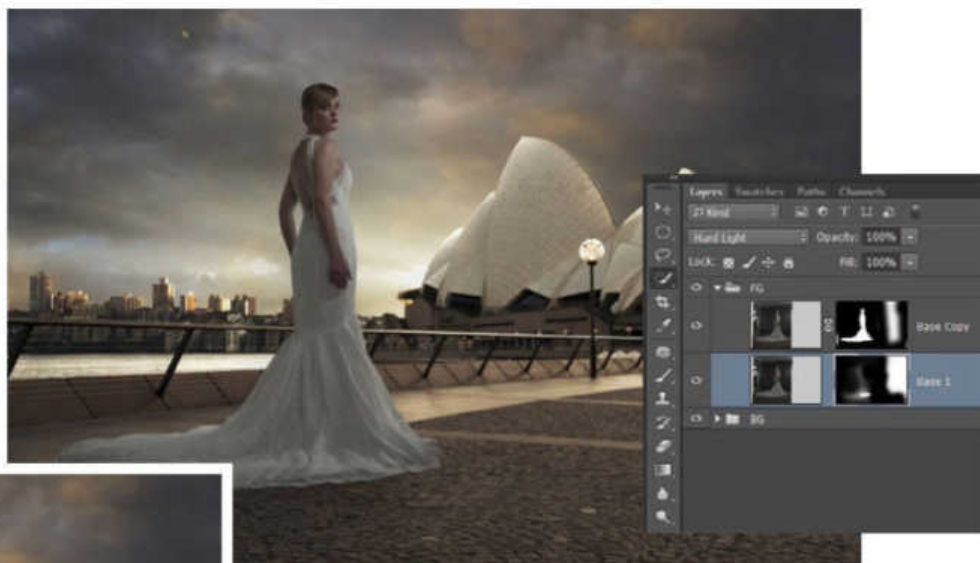
11 Open the image of our model shot against the grey background. Duplicate the image. Using the quick selection tool, extract our model from the grey backdrop. This should be easy to do because there are no complex edges. If the quick selection tool isn't working too well (because of contrast differences between the model and the background), add a curves adjustment layer and clip it to the top layer (CTRL+ALT+G). Move the mid-tones up to brighten the layer below. Once the selection is made, click on the "Add Layer Mask" icon on the layers panel. Remove the curves layer when done.

Note on lighting: For lighting Shanie-Lee, I used as key (dominant light source) a large snoot with a 60-degree honeycomb grid at camera top right to produce a hard light source to mimic the sunlight, as I knew the sunlight was on the right side of the background image (looking at how the sun is lighting up the small buildings and the Opera House). I also used a low-powered flash in silver umbrellas for added contrast at a stop to two stops less than key to light her left and right edges for separation and depth. The lights also bounce around the white walls of the studio and add an automatic fill mimicking a sky dome. I also used a low perspective so she matches the background

12 Ensure the curves layer in Step 11 is deleted. Using the Move Tool (V) select the two layers and drag and drop them onto the background image, above the BG group. Select the layers and put in its own group (CTRL+G) and name the group FG (Foreground).



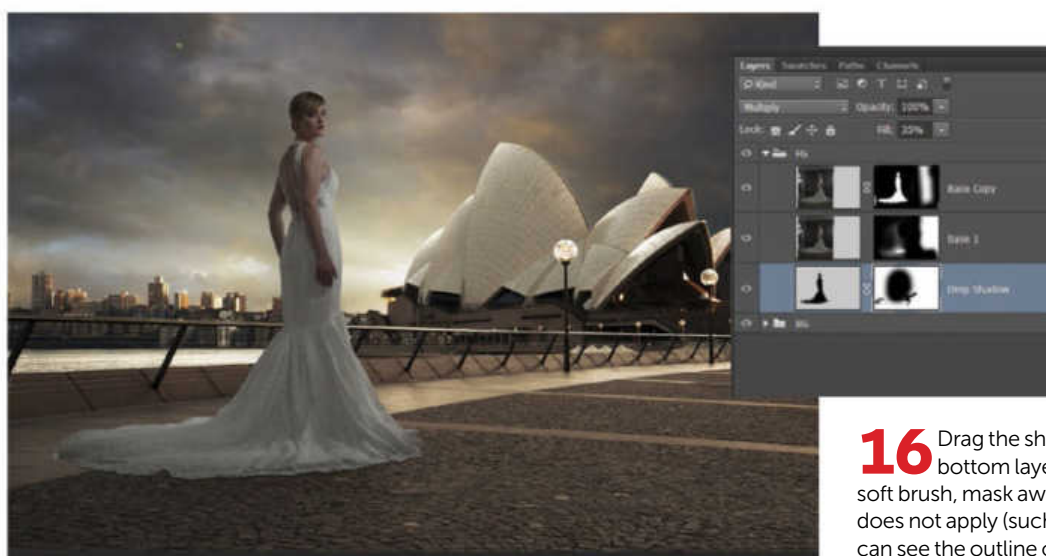
13 Add a layer mask to the bottom layer. Paint over the grey areas that show artefacts (such as the umbrellas) and using a large soft black brush remove any artefacts, encroaching towards the subject carefully. We use this technique to ensure any finer details (such as hair) don't get lost during the foreground placement process. We have covered this technique in a previous issue (Volume 41: "Techniques for Seamless Knockouts").



14 It's looking pretty good already. Let's add the shadows around the dress to make it look more real. Double click the top layer and from the layer properties select "Drop Shadow". Click on the model and drag downwards and you will see the shadow. Place it so it's just under the dress and so that it looks realistic.

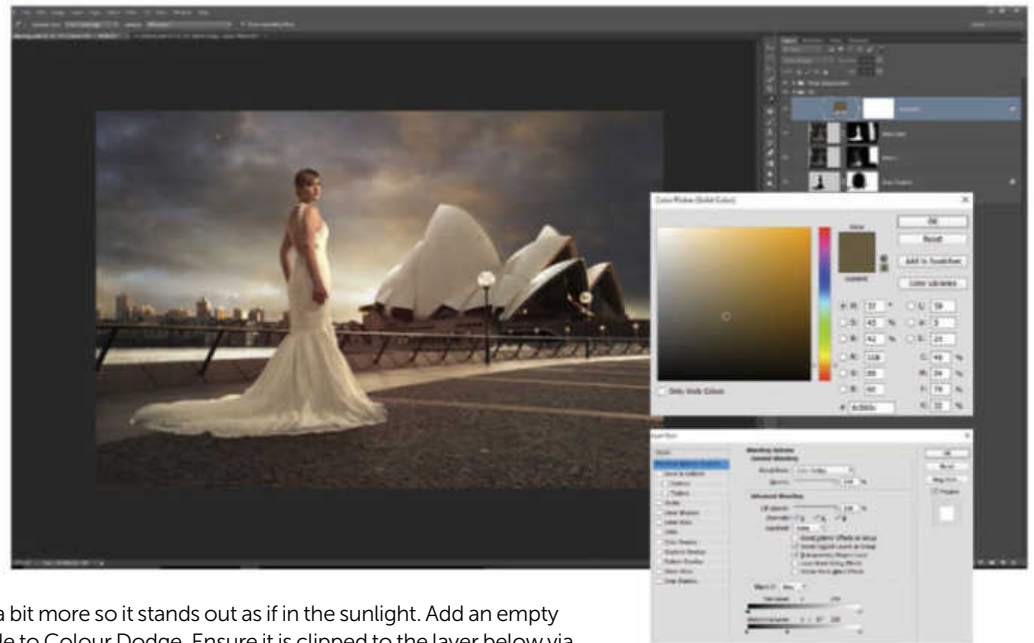


15 We now need to ensure the shadow only applies to the dress and not anywhere else. Right click on the Drop Shadow Effect. From the menu select "Create Layer". This will create the effect in a separate layer. We can now add a mask and ensure it is only visible where required.

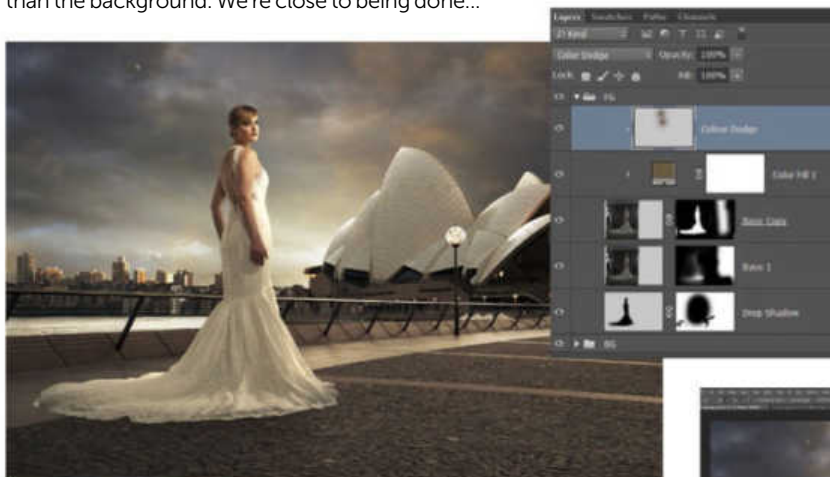


16 Drag the shadow layer down below the bottom layer. Add a mask and, using a black soft brush, mask away the areas where the shadow does not apply (such as the face and arms where we can see the outline of the drop shadow).

17 Now, let's brighten up our model. Add a new adjustment layer on the top. Clip it to the model layer by Ctrl+Alt+G. Set the blend mode of this layer to Colour Dodge. Double click it and from the colour dialogue select a dark golden orange colour. Restrict this effect towards the highlights by double clicking the layer to bring up the properties. Split the black slider as before (ALT+Click) and move the right side of the split slider towards mid point.



18 Let's brighten up her face a bit more so it stands out as if in the sunlight. Add an empty layer and set its blend mode to Colour Dodge. Ensure it is clipped to the layer below via CTRL+ALT+G. Using the same golden orange colour as above paint carefully over her cheeks and right side of her face. This brightness keeps the attention focused on her face, as it is also brighter than the background. We're close to being done...



19 To add some polish, let's add a bit of red to the area where the sunlight shines through. Add a Levels Adjustment layer. Select the Reds from the drop down, and move the black point slider towards the right. This will make the image red. But we want to isolate this at the sunlight peeking through between her and the Opera House. Select the mask, and invert by CTRL+I to hide the red colour. Using a large soft white brush, daub a few strokes in that area to reveal the reds. Add this layer to a separate group (CTRL+G) and rename it to Final Adjustments.



20 As a finishing touch, use the Gaussian Blur technique for a soft, glowing contrasty look. Stamp all the layers so far by pressing SHIFT+CTRL+ALT+E. Name the layer Final. Select Filter/Blur/Gaussian Blur. I chose a radius of 10 pixels. Set the blend mode of this layer to Soft Light and the Opacity of the layer to 25%. We're done – the final image is worthy of hanging on the wall!



Congrats to Shanx for another great tutorial, and if you'd like to see more head to [Facebook.com/maxphotography.au](https://www.facebook.com/maxphotography.au)





PHOTO
STORY

CLIFF HANGER

FOR ADVENTURE PHOTOGRAPHER RAY DEMSKI, CLIMBING ICE CLIFFS IS AS EVERYDAY AS HIS HIGH-END COMMERCIAL SHOTS. HE TALKS TO CAROLINE SCHMIDT ABOUT HIS LATEST PROJECTS AND WHY USING NIKON HAS HELPED HIM TO REACH NEW HEIGHTS.

Words: CAROLINE SCHMIDT

BIOGRAPHY



Born in British Columbia, Canada, Ray's childhood was far from ordinary, so it's not a surprise how extraordinary his career has

become. From the age of 14, he spent seven years with his family sailing the world on a 45-foot sailboat, teaching himself how to shoot using a Nikon D70. These early adventures were the formative experiences of one of the most foremost adventure and action photographers of today. Since becoming a finalist in the Red Bull Illume competition, and thus catching the eye of the Red Bull Photography team, he's completed some remarkable projects that had him scaling mountains and he regularly shoots for high-end clients such as BMW, Adidas, Red Bull and Nikon. www.raydemski.com

“GOT REALLY interested in climbing some time ago when I was asked by Red Bull to photograph athlete Bernd Zangerl climbing the 30m 'Molecule man' in Berlin. Some years and a lot of climbing later, Bernd – by now a good friend – asked me to join him on a climbing trip to the Indian Himalaya. Being able to climb has given me access to the mountains and incredible viewpoints. When we were shooting in the Himalayas we used flash at night to capture the athletes against star trails and it got me thinking about how similar lighting could work well for ice climbing, too. That was the beginning of my *Ice Nights* project, which took place in the Avers valley, Switzerland.

“I wanted to bring a different look to ice climbing by illuminating an icefall with high-quality light. We had Alex Luger climb a 30m icefall at night, while I hung off a rope above him. We lit the scene with three Broncolor Move 1200L battery units: two with Para 88 reflectors and one with a standard reflector or bare bulb, and shot the images with a Phase One q180 80MP back on the 645DF camera. It was a bit like turning the icefall into a gigantic studio. It was to be the first of a series but then Red Bull Photography offered to support my next project, *Norwegian Ice*, and that allowed us to make huge leaps.

“*Norwegian Ice* was a special project. There are always projects kicking around that if you had the budget you'd go and do; and *Norwegian Ice* was one of those. After doing some research, I discovered that 2014/15 was the high point in a roughly 11-year cycle when the aurora borealis would be at its strongest: a perfect time to arrange a shoot to combine ice climbing and the northern lights. The shoot needed a lot of research into the right location and arranging the athletes so it was a long-time coming but we got a great result.

“The equipment used for *Norwegian Ice* was very different to *Ice Nights* as I needed to be much lighter but still retain quality.



We had easy access in Switzerland for *Ice Nights*, so I could afford to be much heavier and use several assistants; but shooting in the Lyngen Alps of Arctic Norway was very different. The trip took two weeks and was planned with a lot less information about the location than we did with *Ice Nights*, so while I had an idea, we didn't know exactly how or where we'd be shooting – we had to be more mobile. We camped out for most of

Above: Taken with a Nikon D800, this image for *Norwegian Ice* needed an exposure of 13 seconds at f/2.8 (ISO 2000).

Left & Right: The project took two weeks to complete and several nights of camping while waiting for the right conditions.

Far right: The team enjoy the spectacle of the Northern Lights after a successful night's shoot.

the trip, ducking into a lodge once in a while for charging and drying out. I chose to use a Nikon D800 and D4 and two Nikon SB-910 Speedlights for lighting, with external battery packs to give them longer battery life in the cold. I set one flash on the ground and screwed another into the ice above the climber; we couldn't afford for the batteries to go flat and, at temperatures as low as -37°C, power drains quickly. I didn't use ➤



RAY DENSKI/RED BULL CONTENT POOL



RAY DENSKI/RED BULL CONTENT POOL



RAY DEMSKI/CLIMBER HANNO SCHLUGE



RAY DEMSKI/CLIMBER ALEX LUGER

Above: Portraits of climbers Hanno Schluge and Alex Luger illuminated by flash for the *Ice Nights* project.
Right: Climber Alex Luger photographed for *Norwegian Ice* using 25 seconds at f/2.8 on the Nikon D4.
Farright: This shot shows Alex Luger as he scales Bruckenfäll. The image was taken at 1/320sec at f/5.6.

modifiers but we did attach green gels for one of the shots to make the lights' colour closer to that of the aurora borealis, and if I needed the light to be more focused I'd use the Speedlights' zoom function.

"When scouting for locations, we had to find an appropriate ice wall for climbing that also gave us a nice view of the sky. We then had to await a clear night with strong aurora borealis and good conditions for ice climbing. If it's warm during the day but drops too low at night, the ice can become hard and brittle, making it very difficult to scale. In the end we found two locations and we got lucky on two nights.

"While I had in my mind how I wanted the images to look, we couldn't test shoot the aurora borealis so it was just an idea. Originally I wanted to freeze the athletes with flash as they climbed, but we needed 15–20 second exposures to get the sky bright enough, which meant our athletes had to hold still in dangerous mid-climb poses. The flash lit them and the shutter stayed open to capture the aurora. I'm happy I managed to get the images in a single shot and not have to composite in post-production.

"I try to shoot eye level or higher than the athlete most of the time as it's good to see their face and the exposure of the climb, but it's tricky to remain perfectly stable when



RAY DEMSKI

you're hanging from a rope, so for some shots we had to anchor a tripod to the wall while I braced myself on the rope. I had to wear pretty thin gloves to be able to handle the camera and change lenses, so I had to take care to avoid frostbite, and the situation is similar for the climbers. It was a long time waiting for the perfect moment for the aurora to appear and then working fast to make the best of it in the short time frame.

"Originally *Ice Nights* was conceived as a series that would develop into shooting bigger and harder to access locations, but *Norwegian Ice* progressed the project much faster than I had planned. Going from *Ice Nights* to capturing the aurora was a big leap, but I'm now considering taking on a true alpine climb. I've got a bunch of other wild ideas in mind, so keep your eyes open for my next project!" www.raydemski.com.

Follow Ray Demski Photography on Facebook and see more images from the Norwegian Ice project online at www.redbullphotography.com. Ray is based in Munich, Germany, and is represented by Upfront.

RAY DEMSKI'S KIT



Ray's equipment is vital to the images he creates, as adventure shoots place heavy demands on his gear. For *Norwegian Ice*, he relied on a Nikon D800 and D4, but he also now uses the Nikon D810. With its 36-megapixel resolution, superb low-light performance and EXPEED 4 processor, it produces the image quality he needs. The D810 is built for tough projects in extreme conditions; it features longer battery life and stringent weather- and dust-sealing.

Ray also has a D750 for when he needs to be light and fast and, shooting at 6.5fps, it gets him closer to the Nikon D4 without the extra weight. Ray uses fast NIKKOR lenses, with one of his favourites being the AF-S 24-70mm f/2.8G for its angle-of-view and optical brilliance. He also carries a NIKKOR AF-S 70-200mm f/2.8G ED VR II, AF-S 16mm f/2.8D fisheye, AF-S 24mm f/1.4G and AF-S NIKKOR 16-35mm f/4.

“I HAD TO WEAR PRETTY THIN
GLOVES TO BE ABLE TO HANDLE
THE CAMERA AND CHANGE
LENSES, SO I HAD TO TAKE CARE
TO AVOID FROSTBITE”



An underwater photograph showing a large shark swimming towards the right, with a diver visible in the distance. The water is dark blue, and sunlight filters down from the surface, creating a shimmering effect. The shark's head and front fins are prominent in the upper right, while its body extends towards the center. The diver is a small figure in the lower right, swimming away from the viewer.

Tyler Stableford

Into
THE DEEP

DIRECTOR AND ADVENTURE PHOTOGRAPHER TYLER STABLEFORD TALKS TO CAROLINE SCHMIDT ABOUT FULFILLING A PERSONAL DREAM OF GIANT MAGNITUDE, BOTH IN SUBJECT MATTER AND AMBITION.

Words: CAROLINE SCHMIDT





KATE ROLSTON

“**W**E WERE TAKEN ABACK by our first encounter with the whale sharks: they were lithe, huge creatures; quiet and solemn,” says commercial photographer Tyler Stableford, while discussing his latest project. In an ambitious feat to capture beautiful underwater fine-art images, Tyler took to Cancun in Mexico with a team including competitive swimmer Ashley Mosher and Tyler’s co-director Kate Rolston to photograph these incredible creatures.

Armed with grand plans, Canon sponsorship and a willing desire to create imagery that spoke from his heart, Tyler embarked on one of his most challenging

personal projects to date. He and Ashley choreographed compositions that consisted of her rising up below the shark, while arcing gracefully. “The images could not look like Ashley was swimming down from the surface to try to get close to the shark – that would look too pedestrian.” However, after some testing, Tyler and Ashley soon realised they had underestimated the scale of their photo ambitions. “The sharks moved more quickly and erratically than we had anticipated. For some serenely optimistic reason I thought it would be easy for Ashley and I to position ourselves perfectly with the sharks.” The notion of having to align a photographer, an unpredictable wild animal and a swimmer in a graceful pose – all

without scuba gear – according to Tyler, made the team feel like they had less than a 50 percent chance of success on shoot day.

To have any chance of getting the images, Ashley had to swim about 50ft in front of the moving shark – a task alone that would exhaust most people – then plunge deep underwater to position herself below the shark – all without a mask, snorkel or fins. It was only then that she could begin to dance: to arch and twirl alongside the shark until she ran out of air. Meanwhile, Tyler kicked hard to align himself with the shark’s tail fin – fighting to swim through the backwash created by the massive fish – to take a dramatic shot using his Canon EOS 5D Mark III and 14mm lens, with Aquatech ➤➤



1



2



3

Previous page) Whale sharks are the biggest fish in the sea, averaging 40ft long and weighing 20 tons. They eat mostly plankton and small fish.
1) Kate Rolston was a second-shooter on this project and captured this image of the shark.
2) After 30 minutes of searching, the team found a group of 40 whale sharks on the day of the shoot.
3) A whale shark shot from above with sun rays penetrating the surface into the deep ocean. Photographed at f/4.5.



“We shot for five hours in the water, with dozens of failed attempts, and also a number of perfect moments”

Sport Housing. “The Caribbean water is incredibly blue, despite the plankton making the water dense,” explains Tyler. “If I had used a longer lens this may have been a problem but, as I was using a wide-angle lens, I needed to get within two or three feet from the shark’s fin to fill the frame – visibility wasn’t an issue. But it also meant that if Ashley was even 5ft away from the shark, the images felt lacking: there was no tension and it looks like she’s swimming 20ft away from the shark due to the way the 14mm lens exaggerates distance.

“It was only a very slim, handful of times that it all came together and worked out. I can’t remember how many times the shark went right, she thought it would go left or I’d lose her on the other side of the shark. The

few times that it did come together, though, blessed us with magical results,” says Tyler. The challenges of completing such a project seem endless. It took an hour’s boat trip and another 30 minutes of searching before they found a group of about 40 whale sharks in the Caribbean water. Though it wasn’t the moving creatures or the four hours in the sea that posed the most difficulty – according to Tyler it was the light. “[The biggest problem was getting] the right exposures in constantly varying lighting conditions. The light changed dramatically whether the sky had cloud or not, or if Ashley was 10ft or 30ft deep, and the tone of the shark is very different to Ashley who wore a white skirt and top to reflect the natural light. We had to play around a lot with camera angles,



KATE ROLSTON

settings and many times we came up short – but a few times we hit the bull’s-eye.

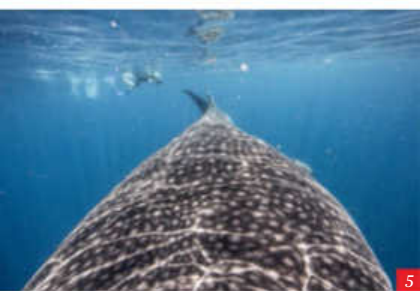
“Despite all the challenges, one aspect of the project that I am proud of is that the images are all uncomposed: one frame, no retouching, no repositioning of the subjects. We shot for five hours in the water, with dozens of failed attempts, and also, magically a number of perfect moments.”

To watch the behind-the-scenes video and to see more of Tyler’s portfolio, visit: www.stablefordstudios.com



KATE ROLSTON

4



5



KATE ROLSTON

6

- 1) Taken with a 14mm lens using an exposure of 1/250sec at f/9 to capture the sun streaks through the water.
- 2) Plankton makes the water murky, but wide apertures can help.
- 3) Ashley and Tyler discussing their plan before heading into the ocean to photograph the whale sharks.
- 4) Kate Rolston shoots Ashley as she dives below the whale shark.
- 5) Tyler swims about the head of the shark towards the fin and Kate who is documenting behind the scenes.
- 6) A behind-the-scenes image of Tyler photographing the shark from within a few feet, while battling with the backwash.

COLOUR

COLOUR IS A CRUCIAL PART OF PHOTOGRAPHY. NOT ONLY DOES IT GIVE OUR IMAGES A SENSE OF REALISM, BUT IT CAN ALSO INFLUENCE THEIR MOOD AND THE WAY THE VIEWER RESPONDS TO THEM. OVER THE NEXT 14 PAGES WE'LL EXPLORE COLOUR IN ITS MANY FORMS, AND HELP YOU MAKE THE MOST OF IT.

IMAGE: LEE FROST



COLOUR ESSENTIALS

BEFORE EXPLORING COLOUR WE SHOULD START AT THE BEGINNING – WHAT IS COLOUR, HOW IS IT CREATED AND WHICH COLOURS WORK TOGETHER?

WHAT'S YOUR FAVOURITE colour? Red, blue, maybe purple? Everyone tends to have a favourite, and often for no apparent reason than at some stage we decide we like one more than the others!

Colour's like that. It affects different people in different ways, but for better or worse, it does affect us, and the way we see the world. Some colours are loud and brash, others are soft and gentle. Some colours go well together while others clash horribly. Colour can be strong or weak, warm or cold, natural or man-made. Different colours also have great symbolic value. Red is for danger, anger, love and fire. Blue is for cold, peace, tranquillity, the sea and sky. Green reminds us of nature, the environment, health and freshness. By bearing these factors in mind you can use the power of colour to great effect, both creatively and emotively.

● COLOUR BASICS

The first step to understanding colour is to know how it's created. It's actually all down to light – the stuff that makes photography possible! Light in the visible spectrum consists of colour wavelengths that range from warm to cold. Think of a rainbow, which is created when light is refracted by raindrops and divided into individual colours.

The colour of an object is created because it absorbs certain wavelengths of light and reflects others. A blue car appears so because the paintwork reflects blue light and absorbs all the other colours. Foliage is green because it absorbs all but green wavelengths. Where an object reflects more than one colour, the colour we see is a combination of wavelengths – orange is formed when red and yellow wavelengths are reflected.

● DOMINANT & RECESSIVE COLOURS

Some colours have more power than others and demand more visual attention. Generally speaking, warm colours such as red, orange and yellow are more dominant than cool colours such as green, blue and purple.

Warm colours are also said to 'advance' because they stand out – red does this most of all. Even in small amounts, red dominates compositions as it screams for attention. Cool hues, conversely, are said to 'recede'.

You can use these properties to good effect in your photographs. If you combine a warm colour with a cool colour, the warmer colour will always dominate the shot, while the cooler colour will form an effective background. Ideally you should make sure that blues and green are used as the background colour and that reds, yellows and oranges appear in front of cooler colours – though by intentionally reversing this, so the cooler colour is against the warmer colour, you'll jar the senses and create interesting images.

The strength of a colour is also affected by the colour behind it. Red looks more intense and vibrant against black than against white or against a cool colour such as blue than a warm colour such as yellow or orange.

● COLOUR TEMPERATURE

As well as creating colour, light can also take on a colour due to the time of day and conditions. When all the colour wavelengths in the visible spectrum are present in equal quantities the result is white light or neutral light – you'll find this in clear, sunny weather during the middle of the day. When some wavelengths are more evident than others, however, the colour of the light changes. At sunrise and sunset, for example, the light is warm because as it travels to earth from the sun, blue and green wavelengths are absorbed by the atmosphere so there's a greater concentration of warm wavelengths. Conversely, in mountainous regions where the air is 'thinner', more wavelengths at the warmer end of the spectrum are absorbed so the light is cooler. Artificial light sources also have different colours. Tungsten light bulbs produce light with a yellow/orange colour while fluorescent is green and neon is red.

These changes in the colour of light are referred to as colour temperature and measured using a unit called Kelvin (K). The cooler the light is, the higher its colour



Above & inset: Early morning or late evening light appears warm, hence the popular photographic term 'the golden hour'. Conversely, the light during dusk and early dawn appears cool.

temperature while the warmer the light is, the lower it's colour temperature. Daylight at high altitude can have a colour temperature as high as 10,000K whereas at sunrise or sunset it may be as low as 2,500K.

We tend not to see these colours so clearly because our eyes can adapt quickly, so if the light is warm or cool, everything appears normal. An exception is when two different colours of light are seen together. If you're sat in a room lit by tungsten lighting at dusk, for example, the light in that room will appear neutral – but if you look out of the window, the light outside will seem blue. This is because your brain has cooled down the warm light in the room, so the cooler daylight outside appears even bluer. With a DSLR, adjusting the White Balance (WB)

setting gets rid of colour casts caused by the colour temperature of the light. In tungsten lighting use the Tungsten WB preset. If you're shooting in the shade where the light is cool, use Shade WB to warm up your images and so on. Daylight WB is intended for use when shooting outdoors in normal conditions, though many photographers prefer Auto White Balance (AWB) as it's effective at getting rid of minor colour casts and provides a compromise if light sources are mixed – when shooting urban scenes at night, for example.

If you shoot in Raw you can also correct colour casts during processing, so if you take a shot in tungsten light using Daylight WB and it comes out with a yellow/orange cast, you can get rid of it later. Easy!

“SOME COLOURS ARE LOUD AND BRASH, OTHERS ARE SOFT AND GENTLE. SOME COLOURS GO WELL TOGETHER WHILE OTHERS CLASH HORRIBLY”



● THE COLOUR WHEEL

An easy way to understand how different colours relate to each other is by placing them on a colour wheel. Sir Isaac Newton was the first person to do this back in the 17th century and artists and designers have been using colour wheels ever since.

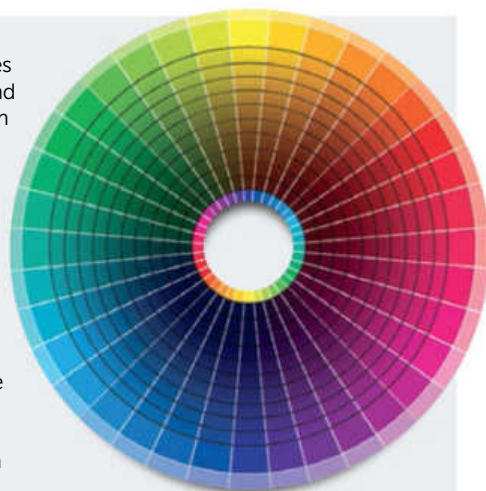
Red, yellow and blue are known as primary colours. They're pure colours that can't be formed by mixing other colours, but all other colours are formed by combining them.

Green, orange and purple are secondary colours. They're formed by mixing two primary colours together. Yellow and blue form green; blue and red form purple; red and yellow form orange. On the wheel, secondary colours sit between primary colours.

If you mix a primary colour with a secondary colour you produce a tertiary colour – yellow-orange; red-orange; red-purple; blue-purple;

blue-green; yellow-green. These three types of colour form the modern colour wheel and represent the colours in the visible spectrum – red, orange, yellow, green, blue, indigo, violet. All the colours of a rainbow!

Colours that lie close to each other on the colour wheel are said to be harmonious or analogous because they work well together – such as yellow and green or blue and purple or red and orange. Colours that are far apart on the colour wheel are said to be contrasting, because they clash, such as yellow and blue or red and blue. Colours that are directly opposite each other are known as complementary colours and they also form strong contrasts – such as red and green or blue and orange. This harmony and discord can be put to great use in your photographs, of which more will be discussed later.



The colour wheel should be your first port of call when it comes to deciding which colours work together in your images and which do not.

COLOUR IN NATURE

COLOUR IS ALL AROUND US, SO MUCH SO THAT WE OFTEN TAKE IT FOR GRANTED – HONE YOUR EYE TO NOTICE AND CONSIDER THE COLOURS IN NATURE



THINK OF nature and specific colours come to mind – primarily the blue of the sky and the green of the landscape. Both colours symbolise freshness, freedom, open space, health, vitality and life.

The countryside is the place to find colour harmony, as nature thrives on it: the soft shades of brown, yellow and orange during autumn, all of which work well together photographically, the many shades of green during spring and early summer as fresh foliage bursts into life and the wondrous sight of woodland floors carpeted with bluebells. Photographers love bluebells, even though they can be a pain to capture well.

Meadows and fields of wild flowers will keep you occupied for hours as you can shoot everything from wide-angle views to close-ups. Use slow shutter speeds to create impressionist streaks of blurred grasses and blooms swaying in the wind or fill the frame with your zoom for harmonious abstracts.

You can also find fantastic colour contrasts in the landscape – the eye-catching yellow of shimmering oilseed rape and fields of sunflowers beneath a cloudless blue sky, or banks of red poppies against a backdrop of green trees. Visit a well-stocked garden and you'll see the rest of the colour spectrum – purple, pink, violet and orange – in abundance in the many varieties of flower that grow.

Early morning is a magical time to photograph the landscape. Soft, golden sunlight adds a beautiful warm cast to everything it touches and in doing so creates perfect colour harmony. Set your White Balance to Cloudy or Shade to enhance this effect. If there's mist hanging around it will soften the colours even more and you can't fail to capture beautiful images. Once the sun starts to rise into a clear sky, the colour

NATURE TIP *Go abstract!*

You can create eye-catching colour abstracts by panning your camera vertically while photographing vibrant forests, so the tree trunks record as vertical streaks against a backdrop of blurry foliage. Experiment with shutter speeds from 1/15sec to 1/4sec. Tea Tree stands are perfect for this technique.



temperature of the light also increases so any warmth fades away. The sky turns deep blue and neutral colour temperatures reveal other colours in their natural form. It's an ideal time of day to capture vivid colour, using a polarising filter to cut through glare and haze so clarity and colour saturation are enhanced. In calm weather, head for water and shoot still reflections of the surrounding scenery to fill the frame with colour. A 0.3 (one-stop) ND grad filter covering the sky and landscape will balance the exposure with the reflection, though you can always do that during post-production.

The middle of the day is not ideal for landscape photography as the light's quite harsh, though if bold colours are your goal – we're thinking fields of flowers or lush foliage and a polarised sky – it can be a productive time of day. If you're fortunate enough to get a cloudy, overcast day when

HELEN DIXON



“IN CALM WEATHER, HEAD FOR WATER AND PHOTOGRAPH PERFECT REFLECTIONS OF THE SURROUNDING SCENERY TO FILL THE FRAME WITH COLOUR”

an overhead sun won't matter much, you'll find it provides the perfect conditions for capturing softer colours – autumnal foliage spilling down hillsides and reflecting in rivers, lush green woodland flanking gentle streams and tumbling waterfalls.

When you're out in the countryside, look for colour contradictions, where man and nature collide to create interesting photo opportunities. A blood-red telephone box at the end of a lonely road; a brightly-coloured shed in the middle of desolate landscape. It's quite common to see things like this as



Top left: Natural colours often compliment each other – the dark brown horse looks at home against the muted yellows. **Above:** Nature is also capable of the most vibrant displays of colour – poppies are a favourite with photographers.

you explore the great outdoors and, though your initial reaction may be negative because such sights jar the senses, they can make great photographs.

Don't forget wildlife too. Many animals and birds blend in well with their natural habitat and create more opportunities to shoot colour harmony, whether it's a backlit owl perched on a fence post in the evening sun, or a cheetah skulking through the parched African bush. On a more accessible level: horses and ponies grazing in grassy paddocks can look beautiful or even the family's pet cat playing hide and seek in your garden. We tend not to equate wildlife with colour, but it's as relevant as any other subject and can be an immense source of inspiration.

● POLARISING POWER

When it comes to maximising colour strength, a polarising filter is invaluable. It'll cut through glare on nonmetallic surfaces so colour saturation is increased and, if you keep the sun to your side, blue sky will also be deeper and more vibrant. Clarity is also improved as a polariser cuts through haze and contrast is increased so colours appear crisper. Polarisers generally have a stronger effect in sunny weather when there's more polarised light, and also during the morning and afternoon when the sun's at a lower angle in the sky. Saying that, forest shots taken in dull or damp weather will benefit greatly from the use of a polariser as it will get rid of the sheen on the foliage that saps saturation. Just pop the polariser on your lens and rotate it slowly while looking through the viewfinder until you get the desired effect.



COLOUR IN URBAN SCENES

IT'S NOT ALL GREY TARMAC, GLOOMY BUILDINGS AND HUMDRUM HUES. EXPLORE YOUR LOCAL CITY AND YOU'RE SURE TO FIND A PLEASING PALETTE TO PLAY WITH

MAN THRIVES ON colour, so what better place to find it than in the bustling urban landscape? We use colour to make a statement, grab attention and stand out from the crowd, so you never have to go very far to find it in abundance and a few hours spent in any town or city is likely to reap handsome rewards.

Architecture is a good starting point. Modern buildings such as apartments and office blocks often use colourful materials in their construction so they're less of an eyesore. The same applies to commercial buildings or retail parks.

Look for bold blocks of colour and see how many different shots you can take, experimenting with composition and angle.

You don't have to include a whole window or a whole door, for example – how about just a corner of it creeping into the frame? Taking a more abstract approach often produces more interesting images because the subject no longer matters – it's the colour that counts and how you frame it.

Parked vehicles offer lots of potential. Coaches, buses and trucks often have colourful graphics on their bodywork that make eye-catching details if you move in close and fill the frame. Look at what's behind them too. A red car in front of a blue, green or yellow wall is going to make a great shot. In fact if you find a good background it's worth waiting a while to see if something or someone colourful passes in front of it, such as a person wearing a colourful coat or carrying a bright umbrella.

Markets are well worth checking out for vibrant patterns – fruit and vegetables laid out in lines, stacks of plastic buckets, mops,

brooms and racks of clothes. You might get some funny looks as you shoot boxes of bananas or tubs of fresh tomatoes but take no notice – they don't know what we know!

Graffiti may upset many people, but there's no denying that it can be the source of fantastic photographs. It adds colour to drab old buildings and depressed areas, and this contrast can look stunning. How about reducing colour saturation in everything but the graffiti, so it stands out even more?

If the weather turns foul you can always head indoors. Modern hotels, bars and clubs often incorporate colourful lighting schemes into their designs and they can turn

ordinary interiors into dazzling displays. Stained glass windows are another winning subject, and although we normally associate them with churches, stained glass is sometimes used in modern architecture too.

Capturing urban colour is all about attitude and confidence. Throw the rule

book out of the window (not literally!) and take some risks. Make the most of your lenses and the way they change apparent perspective. A telezoom is ideal not only for isolating areas of colour, but also for compressing perspective so the elements in a scene appear much closer together. This allows you to juxtapose different elements so they work together.

Wide-angle lenses do the opposite. They stretch perspective so the elements in a scene seem further apart, but this means that even slight changes of viewpoint make a big difference to the composition and you can pull seemingly disparate features together in a single shot – great when you're shooting colourful architecture with all those conflicting angles and bold lines.

PRO TIP

Although we normally advise you to avoid the middle hours of the day as the light's too harsh, when you're shooting urban colour, strong light can work in your favour. Dark shadows add a graphic element and a polariser will cut through glare.



ALL IMAGES: LEE FROST

● USE YOUR PHONE

You don't need a fancy camera to take great urban colour photographs – the camera in your smartphone is more than up to the job, and also great fun to use because it's so small and light. In fact, why not set yourself a project to shoot a series of colour images using just your phone, and see how you get on? There are loads of fantastic photography apps available these days to make your phone's camera more versatile, such as Hipstamatic, which lets you choose different (virtual) film and lens combinations, each one producing images with their own unique look. Best of all, there's no post-production needed because the app does it all, so you can wander around, snapping away to your heart's content and when you get home the finished images can be downloaded. A downside of using a smartphone to take photographs is that it's highly addictive!

Below left: Colour is often vibrant in urban locations. Placing contrasting colours together can work well.

Right: Try using a twilight sky as your backdrop – the cold blue contrasts well with a warm colour in the foreground.

Experiment with different angles too – blue sky makes for a brilliant backdrop in colourful compositions and by getting down low with a wide-angle lens you can capture contrasting colours against the sky – a building, parked car, road signs or shop signs. The wider the lens and the lower you go, the wackier the composition as you can also throw distortion into the mix, which adds impact and dynamism to your images.

Finally, if you want to be completely off the wall, how about shooting colourful zoom bursts? Graffiti, buses, parked cars, stained glass windows, signs, billboards – anything bold and vibrant is an ideal subject. Compose the shot with a zoom lens at its widest focal length, then as you trip the shutter, zoom the lens to the other end of the focal length range so your subject records as an explosion of streaks radiating out from the centre. Experiment with shutter speeds from 1/15sec down to 1/2sec and vary the rate at which you zoom the lens. You may find it easier to tripod-mount the camera, but hand-holding is fine too. It may take a few attempts to get it right, but the results can look great.





COLOUR IN CLOSE-UPS

GRAB A MACRO LENS OR EXTENSION TUBES AND TAKE A CLOSER, MORE DETAILED LOOK AT COLOUR

COLOUR DOESN'T ALWAYS have to be on a large scale – it can also be found in very small amounts too. The natural world can be incredibly colourful in close-up – a quick look around your garden in spring and summer will provide plenty of evidence of that. Flowers come in so many shapes, sizes and varieties and make a perfect subject for colourful close-ups. No garden? You can visit a public space where you'll find beautiful blooms, or pop to your local florist and buy some – good florists often sell flowers individually so you can buy a mixture rather than a bunch of the same type.

Some flowers are more photogenic than others. Bold varieties such as gerbera, tulips, lilies and sunflowers offer great potential and can be photographed in numerous different ways. You can shoot flower portraits, arranging one or two in front of a sheet of colourful card. Contrasting colours work well, so if the flowers are yellow, use a blue background for example, or a green background for red flowers. Soft, shadowless lighting will reveal the richness of the colours perfectly – window light is ideal. A standard zoom will usually focus close enough for shots like this.

If you have a 1:1 macro lens you can shoot fantastic flower abstracts by moving in really close, focusing on the tip or edge of a petal and setting the lens to its widest aperture so depth-of-field is reduced to just a few millimetres. The slightest change of camera position or shift of focus will transform the look of the image so you can produce a wide range of different shots from a single flower. Lilies are particularly good for this differential focusing technique.

Food can be very colourful. Fruits such as lemons, limes, oranges, vivid green kiwi, strawberries and raspberries are ideal – the list goes on. Peppers, chillies and tomatoes all offer potential. Pop to a local market and shoot colourful close-ups of the produce on sale – it's often arranged in neat rows or piles. Or buy a range of colourful foods from your local supermarket and set up some shots.

The same applies with sweets. Smarties, M&Ms, gummy bears, Love Hearts, Skittles, almost any type you can think of makes great subjects for colourful close-ups. You could shoot a whole series of images. Empty each packet onto a flat surface then move in and fill the frame with the random patterns, or arrange them carefully for more ordered compositions. When you're done, eat the lot!

If macro photography is your thing, you'll know that the natural world in close-up can



● COLOURFUL CREATIONS

If you're struggling to find good close-ups naturally, why not create your own mini still-lives? Have a look around the house and you'll find all kinds of things that can be used as props. How about laying out a set of colour pencils then shooting the sharpened nibs or filling the frame with a pattern of coloured stripes? Coloured paperclips or drawing pins can be scattered on a sheet of colourful paper. If you've got young kids, have a rummage through the toy cupboard for magnetic letters, building blocks, pots of paint or other small vibrant objects. You don't need fancy lighting for your still-life, just set it up near a window or open door and use the natural daylight flooding in to illuminate it. A large sheet of white paper or card placed opposite the light source can be used as a reflector to bounce light into the shadow areas.

Right: There is a huge range of harmonious hues available if you look closely. Focusing on a small area often renders the subject abstract, making the colour stand out further.

be incredibly colourful. Butterflies, moths and insects make perfect subjects and if you can capture them on flowers or plants you'll add even more colour to the mix. Bees and wasps are vibrant when you see them in close-up. So are dragonflies, damselflies and grasshoppers. Attach your camera to a microscope and you can capture colour that the human eye can't even see – the

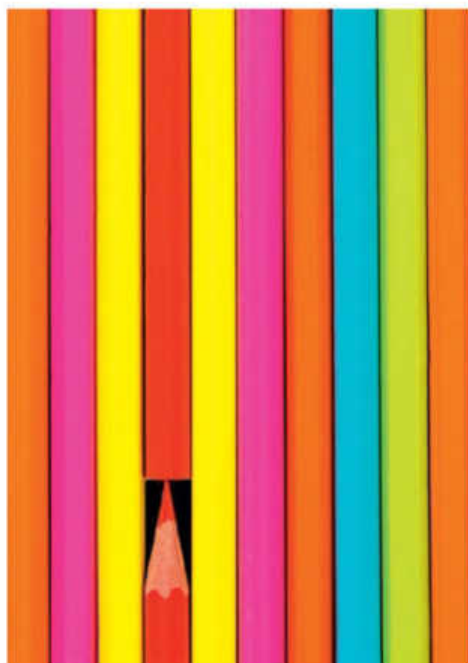
amazing detail in the compound eyes of flies and insects, the colours in crystals, the cell structure in flowers and plants. The closer you go, the more colourful nature tends to become.

On a more accessible level, why not create colourful abstract close-ups? Try dropping colourful plastic objects into a bowl, or stand a clear bowl on some strips of coloured paper, fill that bowl with soapy water then home-in on the bubbles on the surface, which will appear colourful because of the objects in the bowl.

Another idea, which works brilliantly, is to put a few drops of washing-up liquid into a tumbler of water then add drops of olive oil. The soap in the water causes the oil to bead so you get patterns of oil droplets on and in the water that pick up the colour of the objects you place under the tumbler – bits of paper or coloured feathers are ideal.

PRO TIP

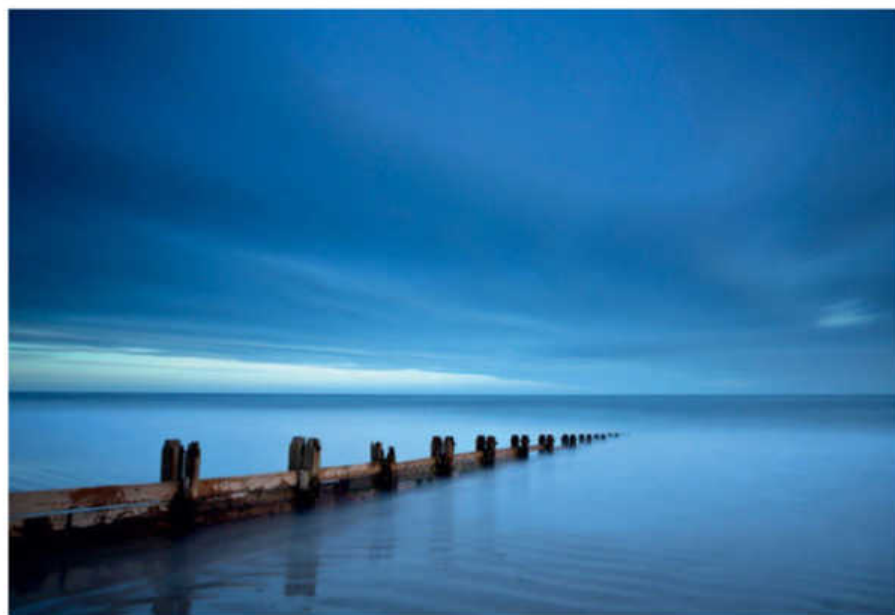
If you don't have a macro lens, buy a +10 supplementary close-up lens from Amazon for under \$30 and screw it to the front of your standard zoom so you can focus really close.



ALL IMAGES: ROSS HODDINOTT

COLOUR THEMES

THINK YOU'RE READY TO START USING COLOUR TO ITS FULL POTENTIAL IN YOUR IMAGES? HERE ARE SOME GREAT THEMES AND IDEAS TO TRY OUT TODAY...



LEE FROST

● LET ONE COLOUR DOMINATE

Although it's tempting to fill the frame with lots of vibrant, clashing colours, you can also produce great shots by sticking to a single colour. In its simplest form this literally can mean homing in on an area of colour, such as a door or a wall, but look for spaces with pattern or texture to avoid a boring photograph, regardless of the colour!

It's also easy enough to create your own single-colour still-lives by placing objects together that are all the same colour. Bottles, flowers, and fruit and vegetables work well. Backlighting slices of fruit then shooting them with a macro lens is also fun.

Look for scenes or subjects where there are different shades of the same colour. You can find this in the urban landscape if you look hard enough, but it's more prevalent in nature where the colour palette is subtle and limited. Green is an obvious one as it's such a

common colour in the spring and summer – think of towering forests in full foliage, or the patchwork of fields in the landscape. Come autumn, the russets, browns and golds in the landscape tend to merge together and look beautiful.

Light can be a great ally here, adding or creating a colour all of its own. Shoot at sunrise or sunset and your images will take on a yellow or orange hue due to the warmth in the light. This is often strong enough to obliterate all other colours in the scene, especially if there's mist around, which helps soft colours to merge into one. Shooting in tungsten or candle light and not correcting the colour cast will achieve the same effect. In cloudy weather, especially before sunrise and after sunset, you may also find that your images take on a blue cast. You can correct this if you like, but don't be in too much of a hurry as it can add mood and mystery.

● SATURATION POINT

Strong colours make a statement: they're bold and brash. We notice people wearing brightly-coloured clothes and colourful cars catch our eye. Bold colours attract our attention, beckon us in, warn us. Well, it's the same in photography.

Strong colours are suited to simple, bold subjects – architecture, reflections, statues, graffiti, patterns and abstracts. The colours are often more important than the subject itself because they're what attracts attention, so you need to pare down the composition to a few elements and colours or the results will be cluttered. Think less is more.

The quality and strength of light dictates how vivid colours record. When the sun shines everything looks wonderful and we assume that colour saturation reaches its maximum. But, bright sunlight causes glare, and that can dramatically reduce colour strength by creating a sheen on surfaces, so if you want your colours to 'pop' you'll need to use a polarising filter to eliminate glare.

Frontal lighting reveals colours well, but images often look flat because shadows fall away from the camera. That's fine if you're going for an abstract effect, but if you want a stronger sense of depth in your photographs, keep the sun to your side so shadows are included in the composition and add dimension and texture. Your polariser will also be far more effective on side-lit scenes.

With some subjects, bright sunlight can be too harsh as it creates shadows and highlights that obliterate detail. Flowers are a good example. They're best suited to bright, overcast conditions. Not convinced? Photograph a flower in full sun, wait for a cloud to drift in front of the sun, take another shot and compare. The colours in the cloudy shot will be richer because contrast is lower when the sunlight is briefly diffused by cloud. The same applies in forests. Foliage appears vibrant in overcast weather as contrast is low and the light soft.



● SOFTLY DOES IT

Colour doesn't have to be bold to be beautiful. In fact, the opposite tends to apply. Vibrant primaries may catch your attention, but soft, muted colours are easier on the eye. They're atmospheric and evocative. They soothe the senses and are likely to provide extended viewing pleasure even if the initial impact is less.

You're more likely to find pastel colours in the countryside. In the landscape, soft colours are everywhere you look, though prevailing weather conditions and the quality of light do make a big difference.

Dull, cloudy weather reduces colour saturation considerably compared to bright sunlight and provides ideal conditions for capturing muted colour. The light is soft and contrast low. Overcast days provide

ideal conditions for shooting details in rocks, soft hues in forests, the warmth of ripening crops or the pastels of wild flowers and reed beds swaying in the breeze. If you shoot wider landscapes, keep the sky to a minimum as it tends to look boring – use a telezoom to fill the frame and exclude the sky completely.

Early morning and late afternoon are good times of day to shoot soft colour. When the sun's low in the sky, the light is more subtle and warm, bringing the colours closer together.

Haze and mist have perhaps the greatest effect on colour, reducing it to delicate shades. Think of a range of hills receding into the distance at dawn, the colour of each layer in the scene becoming ever lighter with distance. Such scenes are best photographed with a telephoto lens so you can compress perspective and emphasise the effect.



LEE FROST



● HARMONY AND DISCORD

We've already established that some colours work well together and are harmonious while others clash horribly. Both relationships can be put to good use in your images.

Colours that are opposite on the colour wheel are said to contrast, whereas colours close to each other harmonise. Yellow and blue, red and green contrast strongly, for example, whereas blue and green or green and yellow are neighbours so they harmonise. This relationship between colours is important because it can have a profound effect on the impact of your images and the way the viewer responds to them.

If a composition includes contrasting colours that are bright and bold, the image will have tension and impact because it jars the senses, but images containing harmonious colour are more relaxing to look at and easier on the eye – they have a calming

effect rather than challenging our visual senses. Think of the beautiful warm colours of a forest in autumn, or the soft hues in the landscape created when mist or haze scatters the light and washes out colours.

Bright yellow against a deep, blue polarised sky is perhaps the most powerful colour contrast you can get, though red and green make a potent combination too. The effect is weakened if one colour occupies more of the shot than the other, or one colour is stronger than the other, though red is so bright that it has a strong presence even in small quantities.

Colours harmonise when they are very weak, in which case the overall feel of the image is soothing. Similarly, colours that in theory harmonise – such as blue and magenta – will clash if they are strong. The rule to remember is bold colours for contrast and weak colours for harmony, irrespective of where they are on the colour wheel.



LEE FROST

CREATIVE COLOUR

WANT TO GET CREATIVE WITH COLOUR? THINKING OUTSIDE THE BOX CAN OPEN UP A VIBRANT WORLD OF PICTURE POTENTIAL

AS YOUR UNDERSTANDING and appreciation of colour grows, you'll become more confident in the way you interpret and record it. The 'rules' of composition can be ignored or broken once you understand their importance, and it's just the same with colour. We know that some colours harmonise and others contrast. We know that bold colours are powerful and soft colours are atmospheric. But what if you start mixing things up, moving the creative goalposts and inventing your own colour language.

Sometimes a location or a situation can encourage that. You suddenly find yourself in a place where the use of colour is different to what you've become accustomed to. This often happens if you visit a different country, where the culture and climate are different and thus so is the way locals use colour. It can be a jolt to your senses, but once you get over the initial shock and let the creative juices flow, amazing images can result.

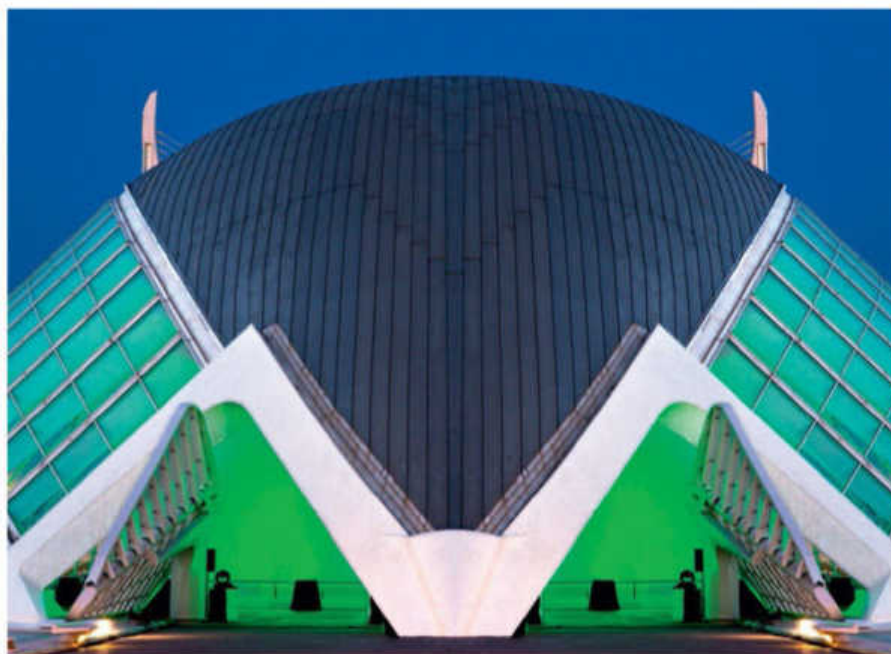
The urban landscape at night is a good example. You can walk around a town or city by day and everything looks relatively normal, but return at dusk as day turns to night and man-made illumination takes over and it's a different story. The use of artificial

“WHAT IF YOU START MIXING THINGS UP, MOVE THE CREATIVE GOALPOSTS AND INVENT YOUR OWN COLOUR LANGUAGE”

illumination creates a surreal palette of colour that would never occur naturally, no matter how hard you looked. In a single street scene you can find the vivid green of fluorescent lighting, the yellow of tungsten, the red of neon, all of which appear vibrant against the sky, which can be velvety blue or tinged by the reds, oranges and yellows created by light pollution.

Our eyes adapt to these different types of lighting, so a floodlit building or a shimmering cityscape may seem quite normal when we look at it. But our DSLRs record the colour of each light source as it really is, so you never quite know how the image will look until it pops up on your screen at the end of the exposure. Often you'll be greeted by a veritable kaleidoscope of weird and wonderful colours.

Experimenting with different White Balance presets when shooting at night can mix things up even more and produce unexpected results, because while the preset



LEE FROST

makes one type of light source look natural, it changes others. If you choose Tungsten, for example, it will make any areas of the scene lit by tungsten look normal (instead of yellow) but any areas lit by daylight will go much bluer. If you set White Balance to Incandescent, any areas lit by fluorescent lighting will come out neutral (instead of green) but areas lit by daylight will go purple.

You can also experiment with different White Balance settings during the daytime. If you set Tungsten your images will come out blue, which can look really effective if you're shooting in mist or fog as it will add a cool, mysterious feel. The opposite happens if you set Cloudy or Shade – instead of being cooled down, your images will be warmed up to add atmosphere. This can work well at sunrise and sunset when colours are naturally warm but may need a little help. And remember, if you shoot in Raw you don't have to add these White Balance effects when you take the shot – you can play around with them when you process the files.

Above: Artificial illumination at night knows no bounds when it comes to colour – go for a wander in your town or city.

Right: Choose a colour and shoot a project – it's easier if you pick your favourite colour as you'll be more aware of it.

Another great benefit of digital technology is that if the colours don't look intense enough in the original image, you always have the option to boost them during processing. If you shoot in Raw you'll need to increase colour strength a little anyway, as Raw files tend to be a little on the subdued side, but you can boost the colours of any image to increase its impact.

The key is not to go too far otherwise the results will look unnatural. Instead of using the Saturation slider, which increases the saturation of all colours, use Vibrance, which only increases the saturation in colours that aren't already well-saturated. Vibrance is also subtler than Saturation so there's less chance of you being heavy-handed. In some cases you may be able to increase Vibrance to 100% and still produce reasonably natural-looking images.

CREATIVE TIP *Colour popping*

It's not everyone's cup of tea, but colour popping is a fun technique to experiment with. The basic idea is that you convert all of the image to black & white but leave one or two key elements in colour so they stand out starkly. It works particularly well on shots where you have a bold, red element, though in theory, any colour will work. The easiest way to colour pop is to open your original colour image then create a Black & White adjustment layer (**Layer > New Adjustment Layer > Black & White**). A layer mask will automatically be added, so to reveal the colour of the chosen element, all you do is click on the Layer Mask icon in the Layers palette, make sure the Foreground Color is set to Black, then use the Eraser Tool or Brush Tool to rub out the Black & White layer and reveal the colour underneath. You can use a large brush for big areas but you'll need to reduce it when you're working on smaller detail or edges to get a neat result.



OLENA ZASNOCHENKO

● PICK A COLOUR

Why not choose a specific colour then challenge yourself to create a portfolio of images that consist only of that colour? Red, blue, green, yellow – the actual colour is down to you. Maybe you already have a few shots in your collection that will kick-start the project? If not, just start from scratch. Grab a camera, go for a wander and see what you can find. Head to somewhere with potential, like a market, where you know you'll find colour. Once you have a few decent shots in the bag it's easy enough to find more. You can also set up some. If you choose red, for example, buy some red flowers, a box of tomatoes and some red peppers from the local supermarket – that's three more shots straight away. Red cars are also easy enough to find; you may even have one yourself. Once you've got a reasonable number of images – maybe 20 – consider creating an art poster by putting them all on the same canvas, adding a white border and maybe a title using the Text tool in Photoshop.



ALL IMAGES: LEE FROST





COMBINE FILTERS & FLASH FOR PORTRAITS

MIXING FLASH WITH DAYLIGHT, WHILE STILL RETAINING ATTRACTIVE BACKGROUND BOKEH, MAY SOUND COMPLICATED BUT JORDAN BUTTERS SHOWS YOU A LITTLE TRICK THAT ALLOWS YOU TO DO ALL THREE...

CAMERA: NIKON D800 / **LENS:** NIKKOR AF-S 85MM F/1.4G / **LIGHTING:** YONGNUO YN568EX, 43IN WESTCOTT APOLLO ORB

IT'S THAT TIME of year when you really should be outdoors taking photographs – who wants to be cooped up inside when we have lovely blue skies, lush green fields and the warmth of the sun on our skin? The only issue is that shooting during the summer often restricts you to where and when you can practice good portraiture.

Only photographing people during the best light of the day either means that you're getting up unreasonably early, or staying out late to make use of the golden hours, when the light is at its softest, warmest and most photogenic. However, if you want to shoot

nearer the middle of the day, when the light is more harsh, then this is a neat technique to have up your sleeve in order to create softly-lit, balanced exposures with a silky smooth, shallow depth-of-field.

In terms of kit, your camera and lens are a good start – choose a focal length suitable for portraits if you're heading for a close crop, or something wider if you want to include lots of scenery. A telephoto lens with a fast maximum aperture is ideal as it allows you to create a nice shallow depth-of-field. You'll need a flashgun and a set of triggers too – I've used a cheap Yongnuo

set-up that cost less than \$150 in total. You'll want a modifier to soften the effect of the flash – softboxes or umbrellas can be had for a reasonable price online too. Last, but not least, you'll need an ND filter – whether a screw-in or slot-in filter, it's worth investing in a reputable brand, such as Lee Filters, Hitech, B&W, Tiffen or Cokin; lower quality filters can create colour casts or affect quality and sharpness. Filters between two- and four-stops are most useful for bright days. Alternatively, you can use a variable ND filter but they tend to be more expensive and not as good optically.





1 SHOOT IN THE SUN Despite the common misconception that a nice, bright summer's day is the perfect time to head out and take photographs, harsh direct sunlight is less than ideal for shooting portraits. As I was photographing my model, Tamrin, around midday in an open area, harsh shadows and blown-out highlights are almost unavoidable when shooting in direct sunlight. The results aren't great.



2 MOVE TO SHADE Shooting in an area of shade offers an improvement. Taking a spot meter reading from Tamrin's face ensures that she is exposed correctly, however as a result the background is blown out and distracting – our eyes naturally travel to the brightest areas of an image first. The only way to ensure a balanced exposure here is to expose for the background and then light Tamrin separately using flash.



3 CREATE SHADE If you're shooting in the open or at an angle without shade available, you can make your own! An assistant holding a diffuser works well, but I'm using a 43in Westcott Apollo Orb softbox, which is big enough by itself to cast a shadow over Tamrin. I fit a Yongnuo flashgun and remote trigger into the softbox, position it to match the angle of the sun and weigh it down to stop the wind taking it!



4 ESTABLISH BACKGROUND EXPOSURE Before turning on the flash you need to establish an ambient exposure. You will be restricted by your flash sync speed first and foremost – my flash sync speed is 1/200sec and I'm using ISO 100 as it's a bright day. The only variable that I have left to control my ambient exposure is the aperture – after a couple of test shots I find that f/8 offers a good background exposure.



5 ESTABLISH FLASH EXPOSURE You can use a light meter to establish flash power, or trial and error. Remember that flash-to-subject distance also controls flash power. I set my flashgun to 1/4 power and position the softbox close to Tamrin, just out of frame here. A quick test shot shows a balanced exposure between subject and background, however at f/8 too much of the background is in focus.



6 FIT YOUR ND FILTER As the ND filter cuts down both ambient light and flash, we can now open up our aperture to compensate, and at the same time achieve a nice shallow depth-of-field, without changing any other settings. The strength of your ND filter will determine your final aperture – I've used a 0.9ND (three-stop) Hitech filter which takes me from f/8 to f/2.8. My shutter speed and ISO remain the same.

FINAL IMAGE

Compared to the shot taken at f/8, the final image takes on a completely different feel and is a much more flattering portrait.

Exposure: 1/200sec at f/2.8 (ISO 100).







PHOTO
SKILLS

ALONE IN A CROWD

EVER DREAMED OF HAVING A LOCATION ALL TO YOURSELF? IF YOU'RE FED UP OF TOURISTS, SELFIE-TAKERS AND THE CROWD BUSYING YOUR SHOTS, JORDAN BUTTERS SHARES A NEAT TECHNIQUE TO TRY

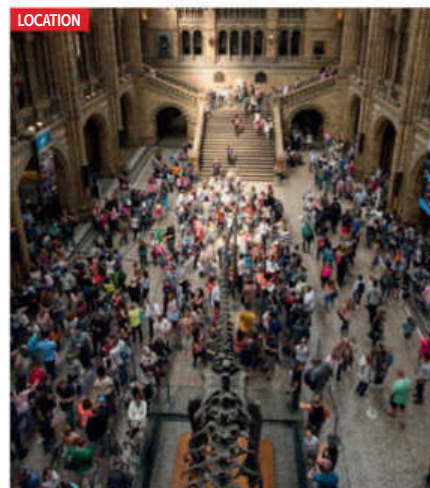
CAMERA: NIKON D800 / LENS: NIKKOR AF-S 16-35MM F/4G ED

IF YOU'VE EVER tried to photograph popular tourist attractions during peak time then you'll know how frustrating an experience it can be. Gawkers, tourists, and the worst of all, those brandishing selfie sticks, will wander into your composition without a care in the world, leaving you at your wits' end! Unless you're able to arrive on site before the madding crowd or stay after they've gone, then getting a clean shot is incredibly tricky, sometimes impossible. There is, however, a way you can shoot busy locations and lessen, or sometimes completely remove, a busy crowd.

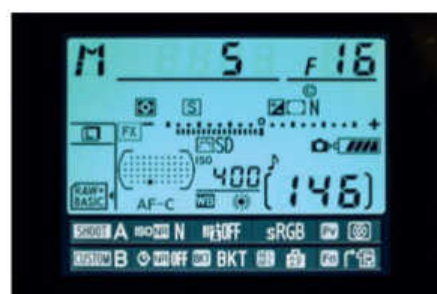
By shooting several frames from the same spot and combining them using Photoshop's little-known Scripts feature, you are able to cancel out anything that doesn't stay reasonably stationary for the duration of

your shoot. Of course, if the conditions are suitable you could use a long exposure as an alternative, however this requires use of a tripod and possibly an ND filter too – exposures will need to run into the minutes to remove slow-moving crowds and any slight camera movement will result in blur.

Foolishly, I've chosen to visit the Natural History Museum in London during the school summer holidays – but it's the perfect chance to show off this technique. I want to photograph the grand Hintze Hall and while the kids are off school there's never a good time to do this. The museum, like many busy tourist attractions, has a strict 'no tripods' policy, so having this trick up my sleeve made the difference between capturing an overcrowded snapshot and taking home a unique image to remember.



LOCATION



1 FIND YOUR EXPOSURE Set your camera to aperture-priority mode. Take a test shot and find a good exposure using Exposure Compensation. Make a note of the settings and transfer these over into manual mode so that the exposure doesn't change mid-sequence. Set a fixed White Balance to suit the conditions too – I've chosen Daylight.



2 GET INTO POSITION Prop yourself in a position that minimises movement – I've rested my camera on a ledge for support. Unlike a long exposure, this technique allows for slight movement between frames, but the more still you are, the better the results. Find your focus point, then switch to manual focus to stop it changing between frames.



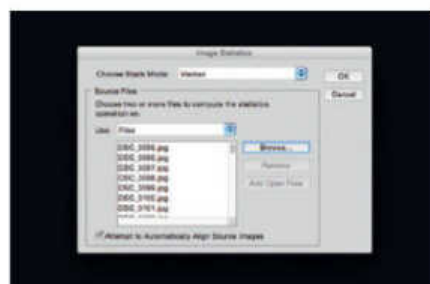
3 SHOOT THE SCENE The busier the location, the more frames you should shoot. I would recommend at least 15 to 30 to ensure you've captured enough 'empty spaces' through the crowd. You can use an intervalometer to fire the shutter every few seconds, but I prefer to do it manually – watch the scene and shoot whenever you see gaps.



4 MIND THE GAPS Make a mental note of areas in which people have stood still for a while and make sure you capture that area when they move on. The space in front of the statue in my composition is almost always busy, so I fire off a frame or two whenever I see a gap, no matter how brief – Photoshop needs to know what's behind the crowd.

TOPTIP: Raw vs JPEG

To save time and processing power, I'd recommend using Fine JPEG mode for this technique. Just remember to set your White Balance and exposure manually. If you do shoot in Raw then make sure that any Raw processing is synced across the entire sequence and the White Balance for each file is exactly the same before using the Script feature.



5 PROCESS THE STACK Load the images on your computer. In Photoshop, go to **File>Scripts>Statistics...** Set the Stack Mode to **Median** and press **Browse** to locate your images. Select all of the images and then check **Attempt to Automatically Align Source Images**, before clicking OK. Photoshop will work its magic – pop the kettle on, it takes a while.



6 TIDY UP When your computer stops chugging away you should be left with a tourist-free scene! If any remnants remain then use the Clone Stamp or Patch tools to remove them. Alternatively if you can find a frame in your sequence that contains an empty space for the offending area, then simply select it, copy it and paste it into place.

GET PLASTERED!

Compared to the shot taken at f/8 the final image takes on a completely different feel and is a much more flattering portrait.

Exposure: 1/200sec at f/2.8 (ISO 100).

TOURIST-FREE ZONE

Finally, use the Crop Tool to tidy the edges of your frame. All done – you'd never have known that the museum was packed with people that day!

Exposure: 1/5sec at f/16 (ISO 400)





OVERCAST OCEANS

AS SUMMER DEPARTS AND OVERCAST SKIES GLIDE IN OVER THE COAST, LONG EXPOSURES BECOME MORE ATTAINABLE. HELEN DIXON EXPLAINS HER TECHNIQUE FOR STRIKING THE BALANCE BETWEEN BLUR AND TEXTURE

CAMERA: NIKON D810 / LENS: ZEISS 21MM F/2.8

WHY WAIT 30 seconds when a couple of seconds will do? Most landscape photographers have a tech-crush on Neutral Density filters – especially Lee Filter's Big Stopper (ten-stop ND) and Little Stopper (six-stop ND). They think silky smooth highlights and puffy waves are the pinnacle of the long-exposure landscape but, while it's a legitimate creative technique, it's not always the goal – especially if you're planning on retaining colour in your landscape work. Most ND filters give a slight colour cast, which is why so many images end as black & white, but using ND grads or no filter at all lets you keep those colourful landscapes. And don't underestimate the challenge of balancing texture and movement; it's an art form in itself.

You can shoot long exposures any time of year when there's an overcast sky. As long as the sky isn't flat, but with breaks and shadows, once you find the right shutter speed you can capture what looks like brooding skies over energetic coastlines. Prior to sunrise or after sunset are often good times, and if you're lucky enough to be on the coast for a dull day prepare yourself for hours of shooting potential. Pack your filters in case the sun starts to burn through the clouds – that's when you'll need to use your heavier ND filters and ND grads to counterbalance the dynamic range between sky and water.

But, in the meantime, keep an eye on the forecast for the promise of a gloomy day as it could provide you with an opportunity to take some of your best landscapes yet.

TOPTIP: Avoiding camera shake



If you're shooting amongst the tide, you might experience camera shake as the water washes past your tripod legs. As the water recedes, push your tripod's legs into the wet sand to anchor it and then it won't move with the next wave.



1 ON LOCATION Having kept an eye on the forecast, and expecting a nice sunrise followed by an overcast day, I headed to the coast for first light. While not blessed with vibrant skies, the forecast was right for the rest of the day. Overcast days provide soft light, which makes detail and texture easy to capture. When capturing ocean movement, it's best to get low, find foreground interest and wait for the tide to recede so that the water acts as a leading line. Wet boulders and rocky outcrops are a good place to start for foreground interest.



2 SET-UP Set the camera to manual mode and use hyperfocal distance for front-to-back sharpness, paired with a mid-aperture; I used f/13. With the DSLR secured to a tripod, remote release attached and spirit level in place to avoid wonky horizons, take a test exposure to get a bearing on the dynamic range. Although it's overcast, the sky is still a little brighter than the water, so I attach a three-stop ND grad to balance them. Engage mirror lock-up, set the lowest ISO, then dial in a shutter speed of between one and three seconds – you're all ready to go.

3 EXPOSURE Using a Lee Filters Little Stopper extends the exposure to 25 seconds, turning the water to a haze and ridding it of any detail. It might make a strong black & white, but as a colour image it's dull. Notice the faster the shutter speed the more detail that's captured in the background waves. The ideal exposure has smooth water surface with detailed streaks of receding water along the beach; an exposure between two and eight seconds strikes a good balance here.

1.3 SECONDS



THREE SECONDS



25 SECONDS



NEVER A DULL MOMENT

Strong foreground and detail throughout the scene makes this an anything-but-dull image.

Exposure: Three seconds at f/13 (ISO 64)



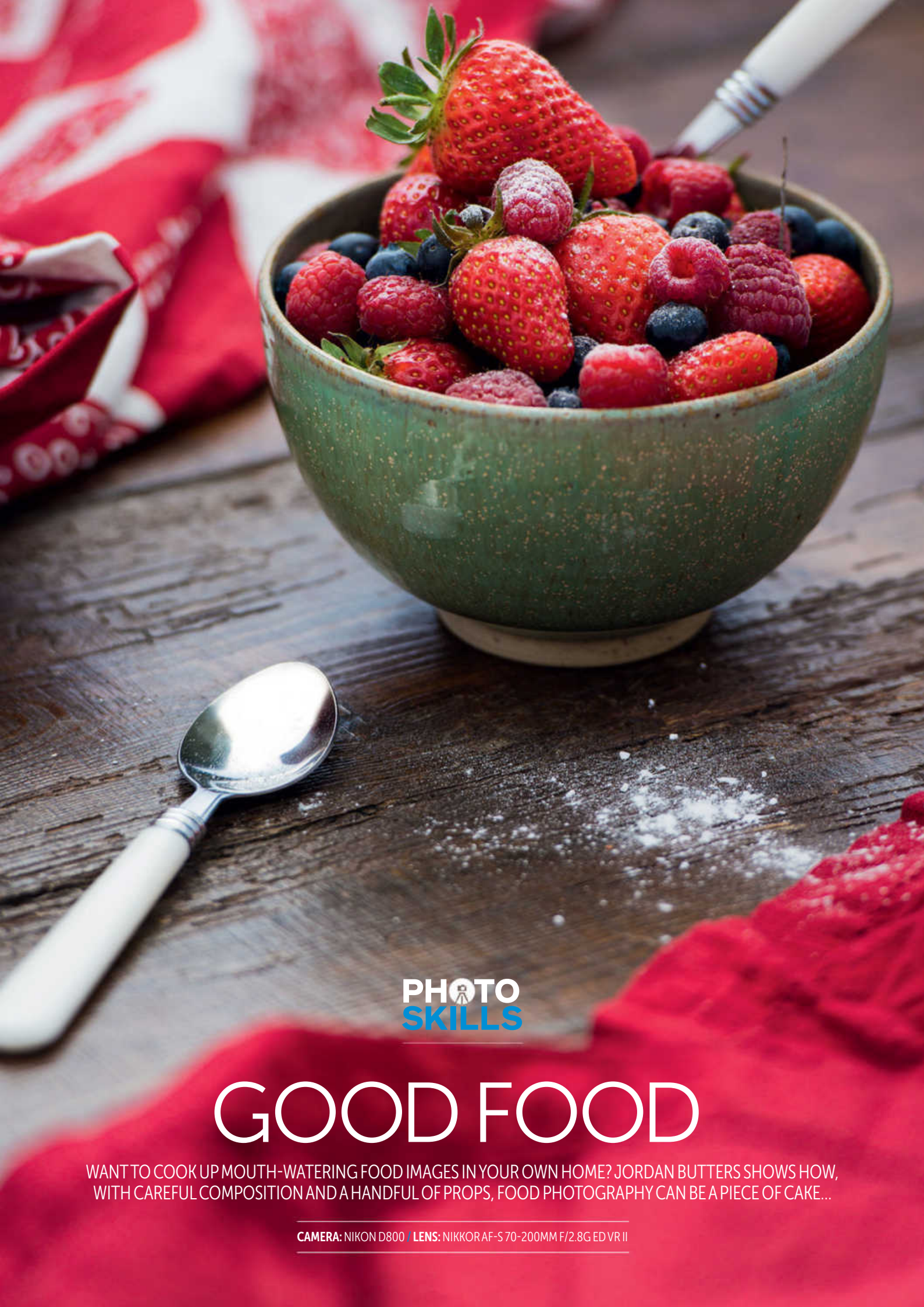


PHOTO
SKILLS

GOOD FOOD

WANT TO COOK UP MOUTH-WATERING FOOD IMAGES IN YOUR OWN HOME? JORDAN BUTTERS SHOWS HOW, WITH CAREFUL COMPOSITION AND A HANDFUL OF PROPS, FOOD PHOTOGRAPHY CAN BE A PIECE OF CAKE...

CAMERA: NIKON D800 / LENS: NIKKOR AF-S 70-200MM F/2.8G ED VR II

I WOULD CONSIDER myself enthusiastically ambitious in the kitchen (that being said, my ambition usually outweighs my ability), and as a result over the years I have amassed an unhealthy quantity of cookbooks! As well as provide inspiration for culinary delights, they are actually a really good source of inspiration for a spot of food photography, too.

You'd be forgiven for thinking that the skill in food photography lies mostly in the preparation and presentation – we're all food photographers when we whip out our smartphones at a fancy restaurant before tucking in, right? However, there's certainly a lot more to high-quality food photography than simply point and shoot. Careful consideration has to be given to light, colour and, perhaps most crucially, composition.

Props play a big part of a successful food shoot – if you're bitten by the bug then it's

worth collecting interesting backdrops (small wood panels painted in various shades are great) and trays, pots, pans, cutlery and tableware to use in your shoots. Rustic, tarnished items and interesting textures tend to work well, as do muted colours and quirky, but not garish, patterns. In terms of kit, you'll need your camera and a fast lens – a 105mm macro is ideal, but a 70–200mm works just as well, as does a 50mm prime, providing you can get close enough to maximise the shallow depth-of-field. A tripod is essential and reflectors and diffusers are incredibly useful too – you can never have too many!

Firstly, decide on a dish – when practising, I would advise using uncooked or unprepared food, such as I have here, as it can be washed, returned to the fridge and eaten at a later date. When using cooked food you'll often find that it's cold and inedible by the time you're done.



1 CHOOSE YOUR BACKGROUND Decide where to shoot and what backdrop to use. Natural light is best: a table in front of a north- or south-facing window is perfect. Shooting towards the light adds depth and atmosphere. Natural or painted wood with plenty of texture is a popular background for food photographers. Here, I've improvised and used painted floorboards as a backdrop.

2 BUILD THE SET

Before introducing the food, gather your props, set your camera up on a tripod and lay out your composition. Switching to LiveView helps as you can reference the camera as you move props into place. Aim for a balanced composition between objects and pay attention to how your eye travels through the frame. Overlapping objects add depth, but be aware of making the composition cluttered, too.



3 STYLE THE FOOD Once happy with your composition, add the food. You want the best-looking morsels to be most prominent, hiding or omitting scrappy portions. Use LiveView to reference again, assembling the food for a balanced composition with the 'hero' of the dish most prominent. A scattering of food around the frame helps set the 'carefree' nature of the shot too.



4 SETTINGS Set your camera into aperture-priority mode and select a low ISO rating and wide aperture. Depending on your background colour you may need to add exposure compensation – as I'm shooting against a light surface, I add +0.7EV. Focus carefully on your 'hero', switch your camera to Mirror Lock-Up mode, if available, and use a remote to ensure sharpness.



5 DIFFUSE THE LIGHT

Even indirect light can be harsh, creating shadows. A white diffuser is an invaluable tool – you can even use a bedsheet! Place it between the set and your light source, so that your frame sits within the 'shadow' of the diffuser. As a result, the light is softer and more even. Introducing a reflector to the left of my composition fills in the shadows even more. The difference that this lighting aid makes is clear to see.



6 FINAL ADJUSTMENTS: A second reflector added to the right, opposite the first, fills in the shadows and creates a flattering, even light throughout. Adjusting the angle and position of the reflectors allows for complete control over the light. This triangular set-up, with the diffused light at the back and two reflectors angled at the front, is common in food photography, and easy to reproduce.

FOOD FOR THOUGHT

The result is a well considered summer food image that can't fail to get your taste buds tingling!

Exposure: 1/50sec at f/2.8 (ISO 100)





PHOTO
SKILLS

BACKLIT BLOOMS

THERE ARE FEW FLOWERS AS SYMBOLIC AND STRIKING AS THE RED POPPY. CAROLINE SCHMIDT DEMONSTRATES
AWAY FOR YOU TO CAPTURE THE DELICACY OF THESE BOLD SUMMER BLOOMS IN JUST A FEW MINUTES

CAMERA: NIKON D810 / LENS: NIKKOR AF-S 50MM F/2.8 WITH EXTENSION TUBES

WHILE YOU CANNOT guarantee sunshine in summer; you can be sure you'll be looking for rainy-day inspiration at some point in the season, and this could be it. There's no reason to let seasonal blooms go to waste while you stay dry as a simple studio set-up is so achievable. A white background can create clean, stylised still-lives, but when using natural light as we are here for a backlight, there are a few technical challenges to be aware of.

You can use most flowers for this technique, but choose one that has an interesting profile and minimal layers to maximise depth-of-field. A poppy is perfect and the translucency of its petals bodes well for backlighting. To fill the frame, you'll likely need a macro lens or, for a low-budget set-up, use a close-up filter or pair a 50mm lens with extension tubes (my set cost \$30 from eBay) to reduce the focusing distance.



1 PICK YOUR SUBJECT Secure a sheet of tissue paper to a window to give you a clean background to work with. Coloured tissue paper can also work, if white is too sterile for you. Pick subjects that are in good condition to minimise editing time and secure to the tissue paper with some sticky tape. You'll get about 30 minutes before the poppy wilts.



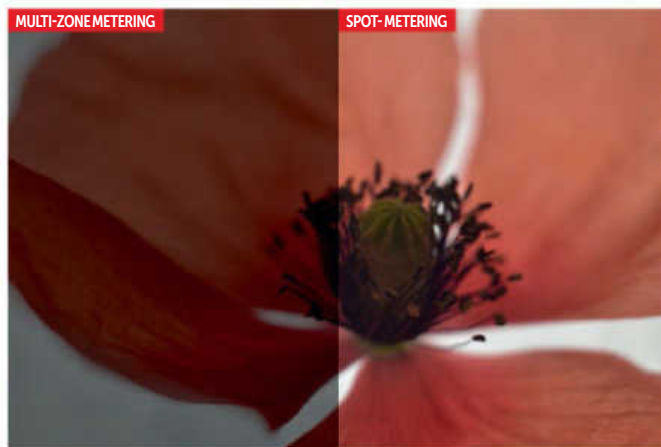
2 SET UP Choose your lens depending on your budget and style. Here, to show the results of the cheapest equipment, I've used a 50mm f/1.8 lens and unbranded electronic extension tubes. While the tubes retain metering and focusing, they're temperamental so shooting manually is still the best option for controllable results.



COLOUR POP

In post-production, you may need to add a little contrast and increase the Vibrance to enhance the colour and lift the background as backlit images can look washed out.

Exposure: 1/250sec at f/3.2 (ISO 200)



3 CONTROL YOUR METERING As your flower is backlit, your autofocus and metering may have a hard time doing their job accurately. Set your camera to spot-metering or centre-weighted mode, to bias your exposure for the flower. Multi-zone metering will often render the bright background as a mid-tone and underexpose your subject.



4 ADD EXPOSURE Using aperture-priority mode, dial in the aperture you want for optimal depth-of-field and the ISO to achieve the 'correct' exposure. If the background looks murky or the subject is too dark, add a stop of exposure by adding positive exposure compensation or lengthening the shutter speed/increasing the ISO if using manual mode.



5 MANUALLY FOCUS As I prefer the aesthetic of a shallow depth-of-field, I'm using a mid-to-wide aperture of f/5.6, which means focus is critical. Autofocus can struggle with backlight as it's low in contrast. If this happens, switch to manual focus and make sure you're using a tripod to secure your composition and ensure shake-free images.

Retouching eyes

THE EYES ARE A KEY PART OF MOST PORTRAITS. JORDAN BUTTERS SHOWS HOW TO BRING EYES TO LIFE WITH A FEW SELECTIVE TWEAKS IN PHOTOSHOP

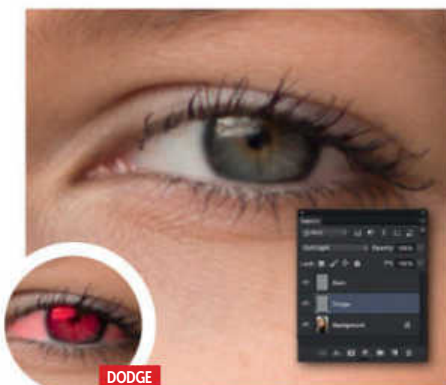
THE EYES ARE the windows to the soul, so I think they deserve some extra time and attention when editing your portraits. The eyes are the primary point of focus for anyone viewing a portrait – we are drawn to eyes first and foremost – this is why it's so important to ensure that when you capture your portrait, your focusing is spot on and the eyes are tack-sharp. Retouching eyes isn't just a case of bumping up the exposure – tastes vary from person to person, but the general idea is for your

subject's eyes to be bright and crisp, without them appearing to glow in the dark!

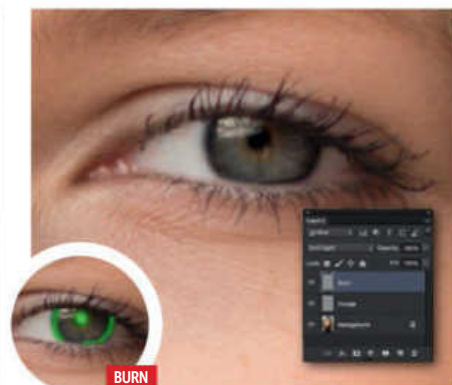
Eyes are a lot more receptive to what we'll call 'exaggerated' editing than the rest of the face. Significant increases in saturation, contrast and exposure, applied carefully, can enhance them, whereas similar adjustments would push more delicate features, such as skin, into the realms of bad taste. This makes selective adjustments, such as dodging and burning, and Layer Masks the perfect tools to boost your subject's gaze.



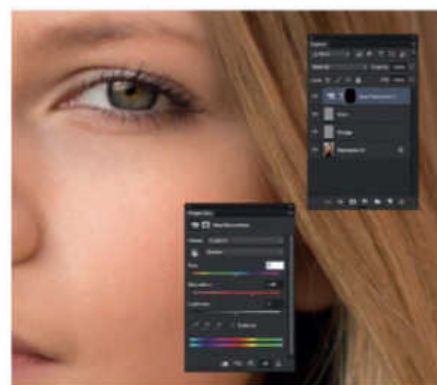
1 CREATE NEW LAYERS Create a new layer by pressing **shift, cmd + N** (Mac) or **shift, ctrl + N** (PC). In the menu that opens, set the **Mode** of your new layer to **Soft Light** and check the box to **Fill with Soft-Light-neutral color (50% gray)** before clicking **OK**. Then press **cmd + J** (Mac) or **ctrl + J** (PC) to duplicate this layer. Rename one of your new layers 'Dodge' and the other 'Burn'.



2 LIGHTEN THE EYES With your Dodge layer active, select the **Dodge tool**. In the top bar set **Range** to **Midtones** and **Exposure** to **18%**. **Brush Hardness** should be **0%** and with a brush Size that allows you to easily work on the eyes. Zoom in and brush over the whites of the eyes, the iris (the coloured part) and any catchlights in the pupils. We've marked the areas to dodge in red, above.



3 DARKEN THE PUPILS Make the Burn layer active and select the **Burn tool** – it's in the same group as the Dodge tool. Set the **Range** to **Midtones** and **Exposure** to **18%**, as before. Use a small brush and darken the pupils. Then, use a smaller brush to burn around the outer edge of the iris – this adds contrast and makes the iris appear three-dimensional. We've marked the areas to burn in green, above.



4 BOOST COLOUR Go to **Layer>New Adjustment Layer>Hue/Saturation**. In the Adjustments palette, increase **Saturation**, concentrating on the effect it has on the eyes – ignore the rest of the image for now. Then go to **Image>Adjustments>Invert** to invert the layer mask – this hides the effect. Use the **Brush tool** with **White** set as your Foreground Color to brush the colour back into the iris.



5 SHARPENING In the Layers palette select the top-most layer, hold down the **alt** key and go to **Layer>Merge Visible**. Then, go to **Filter>Sharpen>Unsharp Mask**. Set the **Amount** to **150%** and **Radius** to **1.2**. Then, go to **Layer>Layer Mask>Hide All** and again, use a soft brush with **White** as your colour to brush around the iris. If you overcook it, reduce this layer's **Opacity** in the Layers palette.

TOPTIP: Lightroom users



You can make the exact same adjustments in Adobe Lightroom too – it's even easier in fact. Use the Adjustment Brush coupled with the Exposure, Contrast, Saturation and Clarity sliders to apply the steps above and add extra punch to portraits.

THE EYES HAVE IT

Your subject's eyes should be bright and punchy, without looking unnatural. If you go too far, reduce the opacity of your adjustments.





PHOTO
SKILLS

SHOOTING IN OPEN SHADE

CREATE BEAUTIFULLY LIT, FLATTERING PORTRAITS WITH NATURAL LIGHT – ALL YOU NEED IS YOUR CAMERA, ONE LENS AND A LITTLE KNOW-HOW. JORDAN BUTTERS SHOWS YOU HOW TO FIND AND USE OPEN SHADE FOR BETTER PORTRAITS

CAMERA: NIKON D800 / LENS: NIKKOR AF-S 85MM F/1.4G

BEING A PORTRAIT photographer, you often have to take what you can get when it comes to the weather and the quality of light. Unless you're lucky enough to own or have use of a studio space then, like the rest of us, the majority of your portrait shoots will take place outdoors. Therefore, for the most part, you're at the mercy of Mother Nature when it comes to the lighting conditions – especially if you're relying solely on natural light.

A common misconception is that a bright sunny day is perfect for portraits, but if you're a regular reader then you'll know by now that this couldn't be more wrong – direct midday

sun is high in contrast and creates harsh shadows and bright highlights, particularly on fair-skinned subjects with light hair. There is a simple solution however that lets you shoot flattering, softly-lit portraits using only natural light, even in the middle of a summer's day – and that's by using open shade.

Open shade is that thin sliver of flattering light that you find where direct sun stops and shade begins. The light is still bright and directional, yet diffused and soft, creating subtle shadows and even lighting on your subject's face. When shooting on an overcast day, technically anywhere is open shade, as the sun is shaded by cloud, however

on a sunny, cloudless day you have to look a bit harder to find that perfect light.

One of the reasons I love shooting in open shade is that you only need minimal kit, allowing you to shoot quickly and easily on location. Your DSLR or mirrorless camera and a fast portrait lens are ideal: a 50mm or 85mm lens with a fast maximum aperture, or a 70-200mm f/2.8 or f/4 telezoom. A reflector can help lift shadows sometimes, but they can be cumbersome out on location, especially if you're shooting solo.

With the basics covered, here's how you go about shooting soft, natural light portraits on location with ease...



1 FIND A GOOD LOCATION Choosing a suitable spot can be tricky. We want our subject to be just within the shade, so that they are bright enough to use a reasonable ISO and shutter speed, but not directly lit. Alleyways, doorways and bridges are great places to start – a narrow alleyway can act like a giant softbox, lighting your subject from the front and back at the same time.

2 AVOID DISTRACTIONS Pay attention to the backdrop – although it'll be out of focus, you should avoid distracting elements or bright highlights behind your subject. When scouting locations, I often find it useful to shoot an empty, defocused frame to see how the out-of-focus background will look. Pay attention to the bokeh and if anything jumps out at you right away, it could be distracting.

3 IT'S TIME TO SHOOT Move your subject into place. Stand them in full sun and get them to slowly step backward until their face is just in shade. In the examples to the right my model, Rosie, only stepped back around half a metre, but the difference in lighting is significant – the harsh shadows and bright highlights instantly disappear and she doesn't have to squint either.



4 SET THE RIGHT EXPOSURE Choose aperture-priority mode, select a low ISO and a wide aperture between f/1.8 and f/4. Use spot metering to meter from your subject's face and take a test shot. On a bright day you shouldn't have any issues with camera shake, but assess the LCD preview and histogram to check exposure. Use exposure compensation to correct any under- or overexposure as required.



OUT IN THE OPEN

Want to learn how to give your subjects bright, sharp and natural looking eyes? Turn to page 74 to find out how to bring eyes to life!

Exposure: 1/1600sec at f/1.8 (ISO 100)



The Raw Challenge

RAW TALENT

ONE FILE. A MYRIAD OF POTENTIAL

IF YOU WERE TO BE PRIVY TO A PROFESSIONAL'S PORTFOLIO OF UNEDITED RAW FILES, YOU MIGHT BE INSPIRED AND RELIEVED TO SEE THE DIFFERENCE EDITING CAN HAVE. THIS MONTH WE GIVE YOU THE CHANCE TO SEE HOW THREE VERY DIFFERENT PHOTOGRAPHERS APPROACH HANDLING THE SAME RAW FILE



ADAM BURTON



RAW CHALLENGE 1: ADAM BURTON

LANDSCAPE PHOTOGRAPHER ADAM BURTON'S SUBTLE PROCESSING STYLE AIMS TO STAY TRUE TO THE ORIGINAL SCENE

WHENEVER I PROCESS a picture, my priority is to maintain the authenticity of the original scene. It is important to me that I keep my picture true to the conditions that I witnessed, or as far as I can remember and for that reason I try to do minimal processing.

When I say minimal, think subtle. All of my pictures are captured in Raw and, as such, there are certain small adjustments that I apply to every image to bring the file to life. For me it is a case of polishing the picture through a series of subtle changes, rather than creating a very different image through heavy-handed processing.

This image of Bamburgh Beach in Northumberland, UK, was captured at the end of a glorious day, when dark menacing clouds rolled in to swallow up a lovely sunset. With just a hint of sunlight reflecting on the castle windows the remainder of the scene was dark and foreboding; this particularly appealed to me and was the reason I fired the shutter.

I was very happy with the wide composition, bringing a sense of space to the picture. But after downloading the image, the Raw file felt a little flat compared to my memory of the scene and this was my main consideration while post-processing.



“AFTER DOWNLOADING THE IMAGE THE RAW FILE FELT A LITTLE FLAT COMPARED TO MY MEMORY OF THE SCENE”



1 STANDARD ADJUSTMENTS After downloading the file into Lightroom 5, I apply a series of generic adjustments. I always apply capture sharpening upon import using the *Sharpen – Scenic* preset. Next, I select the *Lens Corrections* tickboxes *Enable Profile Corrections* and *Remove Chromatic Aberration*. As these changes are universal, I have them saved as a User Preset.



2 WHITE BALANCE My camera is always set to Daylight White Balance and for many situations this does not need to be changed in Raw processing. However in low light, such as when this image was captured, Daylight White Balance can give the picture a noticeable blue cast. To compensate for this I manually adjust the *White Balance temperature* from 5150 to 5353.



3 APPLY A GRADUATED FILTER Although I always use ND grad filters on my camera, I chose to add a digital ND grad filter to intensify the drama in the sky and also to balance the sky with the darker reflections. I reduce the *Exposure* by *-0.30* and increased the *Clarity* by *+16*. The grad is pulled down to just above the castle as I don't want to further darken the building.

While the changes made are subtle and sensitive to the original scene, Adam has added much needed contrast.



4 EXPOSURE ADJUSTMENTS I darken the *Exposure* slightly to -0.30 , but want the castle to be lighter, so increase the *Shadows* by $+26$. I usually stretch the White and Black points across the histogram until just before each clipping triangle lights up. Here, a substantial increase of $+48$ for the *Whites* and -42 to the *Blacks* is used and instantly makes the picture more punchy.



5 PRECISE ADJUSTMENTS When used in moderation, the Clarity adjustment can be a wonderful tool to increase contrast in a picture. Although my image had benefited from setting the White and Black points, I felt a small *Clarity* adjustment of $+13$ would help finish off the image. Finally I applied a small amount of *Vibrance* – about $+15$ – to add some polish to the picture.



6 LENS CORRECTIONS I'm ready to export the image to Photoshop for fixing the dust spots and the wonky horizon. However, something is bugging me about the castle. As it's positioned close to the edge of the frame, lens distortion is causing it to lean over. In *Lens Corrections*, I set *Vertical* to -21 to correct for this, and clicked *Constrain Crop* to crop the edges. Much better!

ORIGINAL FILE



ADAM BURTON



RAW CHALLENGE 2: CAROLINE SCHMIDT

THE MORE TIME YOU SPEND EDITING, THE MORE YOUR STYLE EMERGES AND, FOR ME, IT'S A FLAIR FOR THE DRAMATIC

A BROODING LANDSCAPE with striking reflections and tonal detail is crying out for huge contrast adjustments. With a JPEG file, you have to be especially careful in how you go about this so as not to introduce quality-degrading noise and artefacts, which is why Raw is such a valuable file format as it provides much wider margins to expand exposure information. Thankfully Adam's exposure is spot-on, so I can concentrate on polishing the colour and contrast. Had the file been under or overexposed, I might not have been able to be so demanding on the data without a detriment to quality.

While Adobe Camera Raw (ACR) and Lightroom are fine places to make all Raw edits, I prefer to use ACR for base adjustments then continue to edit the Raw files in Photoshop for the flexibility of Layers, Layer Masks and Blending Modes.

This challenge will be an interesting experiment in technique and vision. While Jordan and I have often worked on the same photo shoots, it's amazing how different our images can look – especially after we've finished editing the pictures – as our styles are polar. Adding Adam to the mix should yield interesting ideas and results.

“RAW IS SUCH A VALUABLE FILE FORMAT AS IT PROVIDES MUCH WIDER MARGINS TO EXPAND EXPOSURE INFORMATION”



1 OPEN IN ACR In its Raw form this image looks strong, but a click of **Auto** neutralises the White Balance, deepens Blacks and brightens Whites. The **Clarity** slider should be used carefully to avoid halos but for instances where there's a lot of mid-tone, this feature increases contrast as well as sharpness. The **Straighten** tool also corrects the horizon.



2 BE DRAMATIC When the image calls for it, I like extenuating the potential for drama. To enhance tonal definition, I often use Black & White adjustment layer (**Layers>Adjustment Layer>Black & White**) to my colour shots, using the **Soft Light** blend mode, to brighten whites and deepen blacks. The effect can be overpowering, so use the **Opacity** slider to control the effect.



3 TACKLE IN SECTIONS Global adjustments often do a good job, but occasionally when there's strong interest in different areas of the image, I like to work in sections so not to lose highlight or shadow detail. Tackling the reflection first, I add a **Curves** adjustment layer and boost the contrast with a loose S-curve, then use the attached **Layer Mask** to hide or reveal the effect (see step 4).



CAROLINE'S FINAL RAW EDIT

The resulting image is high in contrast with neutral tones and a touch of drama – look at that reflection pop!



4 ADJUST THE SKY Repeating the previous step, I correct the sky with another **Curves** adjustment layer and use the **Layer Mask** to hide the effect everywhere else but the sky. As it's easier to reveal the effect than mask it, I **Invert** the Layer Mask then use the **Brush** tool with the **Background color** set to **White** to reveal the sky, varying the brush's opacity to diminish the effect in areas.



5 INTRODUCE COLOUR As any colour cast has been removed and the Black & White adjustment layer has muted the landscape, adding a **Vibrance** adjustment layer reintroduces some tone. Unlike Saturation, Vibrance only targets colours that lack saturation rather than affect all colours regardless of whether they're bold or not, so tends to produce more pleasing results.



6 CLEAN UP THE SHOT As a final step, I zoom in to the image and use the **Clone Stamp** and **Healing Brush** tools to remove sensor dust and marks. A small crop of the image tightens up the composition and a little sharpening using **Unsharp Mask (Filter>Sharpen>Unsharp Mask)** crisps the details. I'm happy with the results – I wonder how it compares to the other two...



ADAM BURTON



RAW CHALLENGE 3: JORDAN BUTTERS

WE GIVE OUR RESIDENT PHOTOSHOP EXPERT FREE REIGN TO SEE WHAT HE CAN COME UP WITH – PURISTS, LOOK AWAY NOW!

BEING GRANTED THE privilege of working on someone else's Raw file is a pretty rare occurrence, but an interesting experiment. Photographers are understandably precious about protecting their images – we take a lot of time, care and attention towards making sure our exposures are the best that they can be. With that in mind, I want to do justice to Adam's Raw file, while at the same time explore a more creative approach outside of straightforward editing.

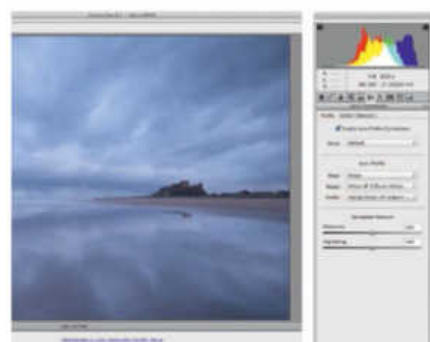
RAW TIP

Find your own approach – any one effect can have several different methods of approach, with similar results. Experiment and find one that works for you

I know Adam is an advocate of getting it right in-camera, and his editing style reflects this, so I want to push the boat out (coastal pun fully intended) to create something a bit different. This is the opposite of Adam's purist approach, so it'll be interesting to see how our final images differ!

One blessing is that Adam's Raw file is perfectly exposed for the scene, so no drastic recovery is required in Adobe Camera Raw, meaning I can get straight to work in Photoshop.

“THIS IS THE OPPOSITE OF ADAM'S PURIST APPROACH, SO IT'LL BE INTERESTING TO SEE HOW OUR FINAL IMAGES DIFFER!”



1 BASIC ADJUSTMENTS Thanks to the relatively flat light, there's plenty of scope in the histogram to boost contrast. Opening the file in ACR I try various White Balance settings, however feel that a high-contrast black & white approach will suit the brooding sky best. I use **Lens Corrections** to fix distortion and straighten the horizon using the **Straighten** tool.



2 FAKE THE REFLECTION The purists may hate this, but I decide to make more of the castle's reflection. In Photoshop, I use the **Lasso** tool to select the castle and some sky before copying and pasting it as a new layer. I then use the **Transform** command to flip the selection upside-down and add a **Layer Mask** with a soft brush at a low opacity to blend the genuine and faux reflections.



3 DODGE & BURN When it comes to fine-tuning areas of an image, my favoured approach is to dodge and burn. To do this without altering pixels, I create a new layer with its **Blend Mode** set to **Soft Light** and fill it with **50% Grey**. I then use the **Dodge** tool set to **midtone** at **18%** to brighten where needed. This is repeated for areas that I want to darken using the **Burn** tool.



JORDAN'S FINAL RAW EDIT

A high contrast black & white with deep shadows and bright highlights – certainly a transformation from the original!



4 INCREASE CONTRAST There are several ways to boost contrast but I like using a *Curves* adjustment layer (*Layers> Adjustment Layers>Curves*) as it allows for fine adjustments. I add an exaggerated S-curve to the *RGB* channel, before selecting the *Blue* channel and removing blue from the highlights – this adds yellow, as it sits opposite blue on the colour wheel.



5 ADD A GRAD FILTER We're getting there now. I want to over-grad the sky to make the most of those clouds, so I add another *Curves* layer. I reduce the exposure from the lower to upper mid-tones, making sure that the shadows and highlights are kept intact so as not to reduce contrast. I then use a gradient layer mask so that only the sky is affected, much like using an ND grad filter.



6 CONVERT TO BLACK & WHITE With the tonal changes made, I convert the image to mono using a Black & White adjustment layer (*Layers> Adjustment Layers>Black & White*). In the Adjustments palette, I decrease the *Blue* channel and increase the *Yellow* channel – this makes the castle pop. Finally, I go back and tweak Curves to increase contrast a touch more. All done!

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PHOTO KIT TESTED & RATED BY EXPERTS

CANON EOS 5DS R

CANON'S LATEST FLAGSHIP DSLR BOASTS A FULL-FRAME SENSOR WITH A RESOLUTION OF OVER 50MP. OUR PROFESSIONAL FIELD TEST REVEALS HOW GOOD IT REALLY IS *Page 90*



Plus

GEAR NEWS: A look at the latest photo kit releases and announcements *Page 88*

FUJIX-T10: The retro revolution continues with Fujifilm's latest compact system camera *Page 94*

LOCATION FLASH: Five affordable portable studio flash kits tested and rated *Page 96*

LUMIX DMC-CM1: Is it a phone? Is it a camera? Is it worth replacing your iPhone 6s? *Page 101*

ACCESSORY TESTS: We rate OP/TECH's latest strap, the Tamrac Anvil backpack and more *Page 102*

SNAPSHOTS: Six ways to maximise sharpness; metering modes explained; Canon's new 8K Cinema EOS System; the future of the camera and more *Page 106*



SONY DOES IT AGAIN

THE ORIGINAL SONY Alpha 7S is revered by many for its incredible high ISO capability and low-light performance, and with Sony recently refreshing the rest of the A7 range, it was only a matter of time before the A7S received a revamp too.

The new A7S II features a 12.2-megapixel full-frame sensor and an astonishing ISO range of 50–409600! The resolution may seem low in comparison to the 20-megapixel-plus DSLRs of late, but with lower pixel density comes improved low-light performance and reduced noise. There's also in-camera five-axis stabilisation, which works with all lenses, new and old, and the revamped XGA OLED Tru-Finder now offers 0.78x magnification – the world's highest viewfinder magnification!

Furthermore, there's 4K internal recording, and a range of professional movie functions including S-Gamut3, Cine/S-Log3, new Gamma Assist Display, enhanced Zebra Function, Full HD 120fps and 4x/5x slow motion – the A7S II is a videographer's dream! The Sony A7S II is available now with an RRP of \$4799. www.sony.com.au



Tamron's fast duo

Revered for its great zoom lenses, Tamron is turning its attention to fast primes, having recently announced the launch of the SP 35mm f/1.8 Di VC USD and SP 45mm f/1.8 Di VC USD.

As well as offering a fast maximum aperture of f/1.8, both are equipped with Vibration Compensation, making them excellent for low light. The 35mm features ten elements in nine groups, utilising two aspherical, one Low Dispersion and one eXtra Low Dispersion element, while the 45mm version features ten elements in eight groups – two aspherical elements and one Low Dispersion. Both offer claimed best-in-class close focus distances: 20cm on the 35mm and 29cm on the 45mm. There's also a slick new look and both are compatible with full-frame and APS-C cameras. Nikon and Canon fittings have been available since October for \$970 for the 35mm and and \$990 for the 45mm, with Sony soon to follow. www.tamron.com.au

Samyang's fast primes

SAMYANG HAS UNVEILED two manual-focus, fast prime lenses for mirrorless models. First up is a new Samyang 21mm f/1.4 ED AS UMC CS, offering an approximate equivalent 32mm (Fuji X/Sony E), 34mm (Canon EOS M) and 42mm (Micro Four-Thirds) focal lengths. There are eight elements in seven groups, including one extra low dispersion and three aspherical. The second new optic is the Samyang 50mm f/1.2 AS UMC CS. This focal length translates to approximately 75mm (Fuji X/Sony E), 80mm (Canon EOS M) and 100mm (MFT) and features nine elements across seven groups including two aspherical lenses and Ultra Multi Coating. Both are also available as cine lenses – 21mm T1.5 and 50mm T1.3, respectively. Manual focusing at such wide apertures is going to test your skills, but if you're up to the job then the photo 21mm will set you back just £280 with the 50mm coming in at £310 and both respective cine lenses each costing around £30 more. www.samyang-lens.co.uk



MILVUS FOR CANON & NIKON UNVEILED

PREMIUM OPTICS MANUFACTURER Zeiss has unveiled a new line of high-specification lenses for Canon and Nikon DSLRs. The Milvus range has been optimised for the most recent high-resolution cameras, such as the Nikon D810 and Canon EOS 5DS. At the time of launch, six new models are available – 21mm f/2.8, 35mm f/2, 50mm f/1.4, 50mm f/2 Makro, 85mm f/1.4, and 100mm f/2 Makro. All feature nine-blade apertures, anti-reflective coating and claimed distortion-free optics. They are all manual-focus only, however, and will cost a pretty penny, with prices starting from \$1800 for the 35mm. www.zeiss.co.uk



RE-IMAGINED CLASSIC

Canon has introduced a new 35mm lens to its line-up. The EF 35mm f/1.4L II USM is a professional prime offering a classic perspective. The lens is the first to feature Blue Spectrum Refractive optics, for high image quality across a range of scenes. It also features Subwavelength Structure Coating for improved contrast and minimal flare. A nine-blade aperture ensures smooth bokeh and ring-type ultrasonic motor delivers smooth and silent autofocus. The new lens is available now, priced at \$3100. www.canon.com.au



TRAVEL IN STYLE

Manfrotto has released the Advanced Travel Backpack, designed to hold personal items in the top main compartments and photo kit in the bottom section. The backpack, available in blue, brown or black, features removable padded dividers and side access to gear, along with lockable zips and multiple carry options for tripods. It looks good, as does its \$280 price tag. www.manfrotto.com





OUTDOOR OPTIONS FROM LOWEPRO

LEADING BAG BRAND Lowepro has released two new series of backpacks, aimed at keen outdoor photographers. First up is Whistler (1), a four-season and alpine-inspired technical backpack series available in two sizes – the (\$400) 350 AW and (\$575) 450 AW. Aimed at wilderness photographers carrying camera, video and functional outdoor equipment, the bag's hinged and zippered back panel offers partial or full access to photography gear, and its rigid internal structure can support attachment of skis, poles, tripods, ice axes and more. Its extra-protective build keeps gear safe from the elements, including a waterproof fabric and base, detachable all-weather cover and removable camera gear insert. The updated Photo Sport II series (2) is aimed at photographers involved in aerobic sports or activities. The (\$210) Photo Sport BP 200 AW II and (\$260) 300 AW II both feature lightweight, weather-resistant materials, side access to kit and a custom pull-tab to tighten and stabilise the bag's photo gear space in one swift action. The harness system, padded waistbelt and adjustable shoulder straps offer padding and comfort, while a two-litre reservoir safely stores fluids. www.lowepro.com.au

GITZO REVAMP TRAVEL RANGE

PREMIUM TRIPOD BRAND Gitzo has updated its Traveler range of tripods and introduced a range of stylish, high-end ball heads. The Traveler tripods boast a 180° leg-folding mechanism and the legs are constructed from Gitzo's cutting-edge Carbon eXact tubes, which are stiffer than the Carbon 6X tubes used on previous models. There are three series in the range – Series 0 is the slimmest, Series 1 balances weight with height and rigidity, while Series 2 offers the ultimate stability. A Series 2 Monopod is also available. The tripods (without heads) start at around \$900, while the monopod is \$350.

Also announced is a new range of ball heads for Gitzo's Traveler and Mountaineer tripods, with three models in the launch line-up. With prices starting at \$400, the Center Ball Heads are coated with tungsten disulphide for ultimate smoothness and locking performance and offer a quick release and independent pan lock, with two models boasting friction control. The Center Ball Heads are also included in the new Traveler tripod kits, as well as in Mountaineer tripod kits. www.gitzo.com



Nikon adds trio to lens range

NIKON HAS ANNOUNCED two new lenses and a revamp of one of its most popular optics. The (\$1100) NIKKOR AF-S 24mm f/1.8 (1) is a compact, fast-aperture wide-angle for FX and DX-format DSLRs aimed principally at travel photographers. At the other end of the scale is the AF-S 200-500mm f/5.6E ED VR super-telephoto zoom (2), costing \$1900, weighing 2.3kg and aimed at nature and action photographers. It's compatible with 1.4x and 2x extenders and features a claimed 4.5 stops of Vibration Reduction. Last up is an update of the popular 24-70mm f/2.8 zoom (3). Boasting improved optics, faster AF and better build, the NIKKOR AF-S 24-70mm f/2.8E ED VR costs \$3000. www.nikon.com.au



THERE'S NO CATCH

BOOQ has released the (US\$295) Python Catch, a top-loading shoulder bag with capacity for two DSLRs, up to four lenses, a laptop plus accessories. Adjustable dividers securely hold your camera kit while the interior flap offers transparent pockets to keep stored accessories visible. A zippered rear pocket safely holds a 15in laptop. Frequent flyers will appreciate the bag's luggage trolley compatibility and an adjustable padded strap for comfortable carrying. The exterior fabric is weatherproof and a rain cover with reflective elements provides protection and visibility in poor conditions. Exterior storage includes a top zipper pocket, two side pockets and a small zippered front pocket. www.boobags.com



MANFROTTO'S 290

Manfrotto's popular 290 range of tripods and monopods has seen a major update. The 290 Xtra comes in aluminium or carbon-fibre and sports four leg-angle positions, while the aluminium-only 290 Dual features the innovative 90° centre column mechanism. Prices start at \$230 for the 290 Xtra and \$290 for the 290 Dual. The updated 290 monopod boasts rubber leg-warmers and an angled wrist strap and costs \$100. Also announced is the revamped (\$160) 804 three-way head, which features a more compact, lightweight Adapto body with retractable levers and rubber handles. www.manfrotto.com



BUDGET SUPERZOOM

TAMRON HAS released the 18-200mm f/3.5-6.3 Di II VC zoom, an update of one of its best-selling models. Available initially in Canon and Nikon mounts (a Sony fitting will follow), the Tamron boasts moisture resistance and Vibration Compensation stabilisation (except on the Sony version), close focusing to 49cm and 16 elements in 14 groups. Designed for APS-C DSLRs, it gives an effective focal length range of around 28-310mm lens and costs only \$300. www.tamron.com.au



SAMYANG XEEN

IF HIGH DEFINITION VIDEO is your thing, then you may want to check out Samyang's XEEN lens series. Boasting a very fast T1.5 aperture, the 24mm, 35mm and 85mm lenses cost around \$3150 each and are available in Canon, Nikon, Sony E and Micro Four-Thirds fittings, with three further lenses to follow in 2016. Samyang claims the XEEN lenses offer outstanding resolving power that maximise high definition video, while multi-nano-coatings minimise flare and ghosting. www.xeenglobal.com



CANON EOS 5DS R

Boasting the highest resolution of any DSLR to date, Canon's latest launch has raised the bar when it comes to image quality. But is there more to life than megapixels?

Test: LEE FROST

SPECIFICATIONS

Guide Price (body only): \$5200
Image sensor: Full-frame (24x36mm)
Resolution: 50.6-megapixels
Maximum image resolution: 8688x5792 pixels
AF points: 61 including 41 f/4 cross-type, five dual cross-type at f/2.8 and one cross-type at f/8
ISO range: 100-6400 (expandable to 50-12800)
Shutter speeds: 1/8000sec-30 seconds & Bulb
Continuous frame rate: 5fps
Built-in flash: No
Monitor: 3.2in Clear View II TFT (1,040,000 dots)
Storage: Dual slot Compact Flash Type 1, SD, SDHC, SDXC AND FLU SD. UHS-1 supported
Size: 152x116.4x76.4mm
Weight: 845g (with battery and card)

EVERY NOW AND then, a DSLR is launched that gets everyone talking. Canon did it years ago with the EOS 5D as it was the world's first affordable and reasonably compact full-frame DSLR. Nikon had the forums buzzing when the D800 and D800E appeared, boasting amazing 36-megapixel sensors. Now it's Canon's turn again to set tongues wagging with the 50.6-megapixel EOS 5DS. Never before has a 35mm-type DSLR offered such high resolution. On paper it's a game-changer, taking image quality to a level that has never been seen before in a 24x36mm sensor.

There are two versions of the EOS 5DS – the 5DS and the 5DS R tested here. Both cameras are exactly the same bar one feature – the 5DS R has a low-pass cancelling filter on the sensor. The low-pass filter is there to prevent moiré patterns in your images, which can occur in areas where there are fine repeated patterns, such as the weave in textiles. The low pass filter hides moiré effects by slightly softening the image. By removing it, or cancelling it as the EOS 5DS R does, you get sharper images, but there's an increased risk of moiré patterns, which, when they



FLAGSHIP MODEL: Externally, only that distinctive red R badge separates the EOS 5DS and EOS 5DS R.

appear, are very difficult to get rid of. In theory, for most subjects moiré shouldn't be an issue, so for just \$300 extra you get the 5DS R and even better image sharpness than the 5DS offers (which retails at \$4900).

In the flesh the EOS 5DS looks just like an EOS 5D Mk III and in practice it handles like one too, so if you already own that camera, the EOS 5DS immediately feels comfortable and familiar. It has the same weatherproof magnesium alloy body (though with a strengthened baseplate and tripod mount so you can clamp it tight to the tripod head to reduce vibrations); it takes the same battery; it has the same shutter speed range, exposure modes and 61-point AF system. The menus and controls are also virtually identical.

The main difference between the EOS 5D Mk III (which is still available) and the EOS 5DS is the leap in resolution, from 22.4-megapixels to 50.6-megapixels – more than double. The EOS 5DS also has dual DIGIC 6 processors to allow a decent shooting and burst rate despite the increased resolution (up to 510 Large JPEGs or 14 Raw files at 5fps with a UDMA CF card installed), whereas the EOS 5D Mk III has one DIGIC 5 processor (managing 6fps).

CLOSEST RIVALS

- **NIKON D810:** The successor to the superb Nikon D800 and D800E, this is Nikon's best DSLR to date. It offers a full-frame 36.3-megapixel sensor with no low-pass filter.
- **CANON EOS 5D Mk III:** It's a few years old now, but it can still hold its own. The 22.3-megapixel sensor produces superb results and the massive ISO range (expandable to 102400) makes it a brilliant camera for low-light photography.
- **SONY ALPHA A7R MK II:** Boasts the world's first back-illuminated 42.4-megapixel full-frame sensor (with no low-pass filter for increased image sharpness), super-fast 399 point AF, five-axis IS and 4K video.

The metering system of the EOS 5D Mk III is fantastic, but the 5DS goes a step further with its 150,000 pixel, 252-zone RGB+IR metering sensor, plus you can shoot Raw at reduced resolutions of 28- and 12.4-megapixels.

A clever new feature is the option to set a shutter delay when using mirror lock-up, so instead of having to press the shutter release twice – once to lift and lock the mirror and a second to trip the shutter – you press the shutter release once, the mirror lifts and locks, then after the chosen delay period the exposure is made. A cam controls mirror movement and reduces the recoil when you trip the shutter. This slows down the shutter movement, which sounds and feels odd to begin with – but it does make it quieter in use.

In use, the EOS 5DS handles just like a EOS 5D Mk III. It's quite large and feels substantial ➡

ULTIMATE DETAIL (LEFT): The level you can zoom in blew me away – tiny objects at a distance can be viewed in detail.
NO MOIRÉ (RIGHT): The EOS 5DS R doesn't feature a optical low pass filter. Images are sharper, but at the risk of moiré.

FULL-FRAME



100% ZOOM





in the hand, but it's not over-heavy and it's very well balanced, whether you're using a compact prime lens such as a featherweight 50mm or a big, heavy telezoom. The control layout is logical and the controls themselves are both a good size and accessible. The rear screen is big, bright and super-sharp and so is the Intelligent Viewfinder II, which shows 100% of the image area. There's an electronic level on the rear screen, which is also visible in the viewfinder so you can check the camera is level as you shoot.

Like all high-end DSLRs, the EOS 5DS has the usual selection of exposure modes – aperture-priority, shutter-priority, program, manual and Bulb, plus a Scene Intelligent Auto mode. Metering patterns are Evaluative, centre-weighted, Partial and Spot. There are Picture Styles that users of this camera are never likely to use, although the in-camera HDR and multiple exposure modes do have their occasional creative uses.

The AF system is fantastic for a camera designed for general use. It offers six AF Area Selection modes from single to 61-point, plus you can customise the focusing to suit your needs using five pages of options in the AF menu section! LiveView is excellent and highly recommended for critical focusing – you can magnify the subject 6x or 16x.

Of course, what you really want to know is does 50.6-mega pixels make a difference? Well, I'm pleased to say the answer is a big fat yes! Image quality is stunning. Shoot in Raw, blow up the images to 100% on your computer screen and you'll be amazed at the detail and sharpness. Images are crisp, punchy and the colours vibrant. Shoot at a wide aperture and the sharp areas look even sharper because the contrast between them and the out-of-focus areas is so great. I've never seen better from a DSLR before and

ISO COMPARISON: The EOS 5DS R controls noise well, up to a point. A reduced ISO range with useable image quality is more useable than a vast range of unusable ISO values.



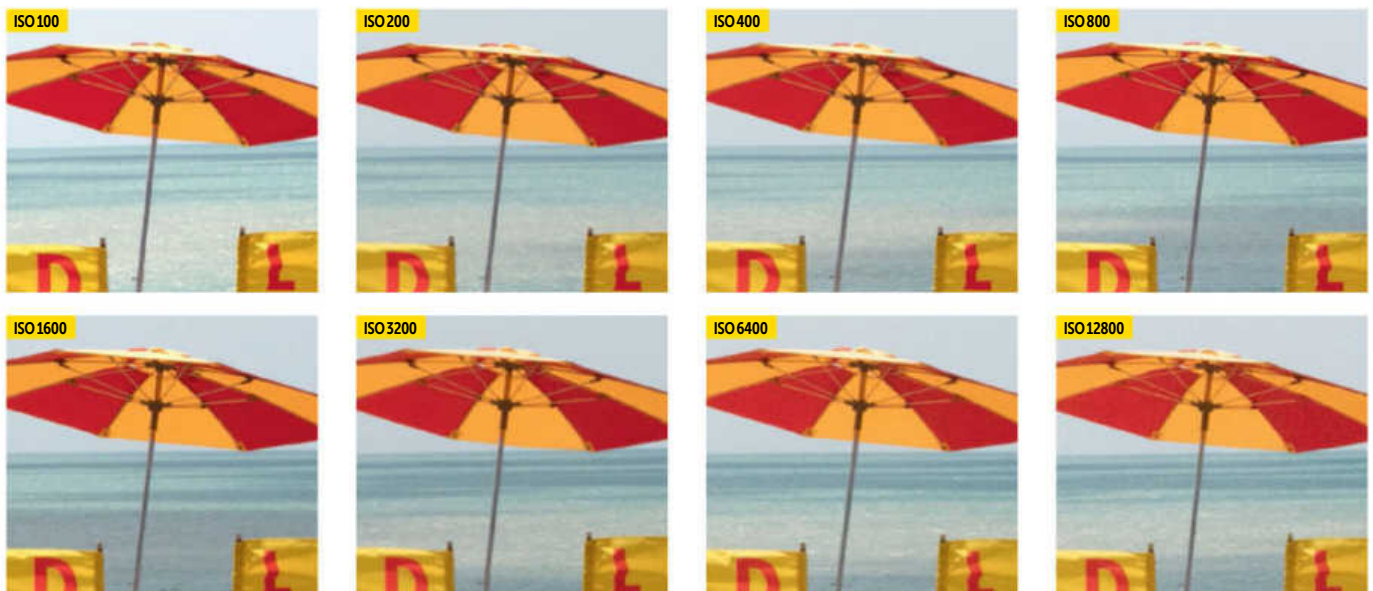
IN DETAIL (RIGHT): With good technique comes incredible detail, but any shake is emphasised.
FAMILIAR LAYOUT (BELOW): The EOS 5DS R is almost identical in layout to the EOS 5D Mk III.

“OF COURSE, WHAT YOU REALLY WANT TO KNOW IS DO THOSE 50.6-MEGAPIXELS MAKE A DIFFERENCE? WELL, I’M PLEASED TO SAY THE ANSWER IS A BIG FAT YES! IMAGE QUALITY IS STUNNING”

having tested the Pentax 645Z medium-format digital camera, I'd say the EOS 5DS isn't far behind it, despite costing less than half the price. The standard output size of files from the EOS 5DS is almost 75x50cm, which is double the size of files from the EOS 5D Mk III. If you like to print your images big, this is a massive leap forward in quality.

Of course, there are implications to cramming so many pixels onto a sensor measuring only 24x36mm. Those pixels are smaller for a start, so there's a greater risk of increased noise and reduced dynamic range. Thankfully, noise is well controlled and the

dynamic range is excellent at up to ISO 3200, matching or beating both the EOS 5D Mk III and the Nikon D810. The ISO range of the EOS 5DS has been capped to help deal with noise – which gets worse as ISO increases. The native ISO range is only 100-6400 (expandable to 50-12800) whereas with the EOS 5D Mk III it's 100-25600 (expandable to 50-102400). In most situations, ISO 6400 is more than enough, and having tested the EOS 5DS at all ISO settings, I'd be happy to use it at any ISO including 12800 when needs must. But the EOS 5D Mk III gives better results at those extreme ISOs (12800+).





Exposure: 1/100sec at f/8 (ISO 100)

Higher resolution also means bigger files. Raw files range in size from around 50–80Mb (on the EOS 5D Mk III they're under 30Mb), so you get half or less images per memory card. Process those Raw files and the saved 16-bit TIFFs top 300Mb each, compared to 120Mb for EOS 5D Mk III TIFFs. You'll need a computer with both fast processors and plenty of RAM to handle files. I use a Mac Pro with dual six-core 2.4Mhz processors and 24Gb of RAM, but if you've only got a single processor and 4Gb RAM you might need to update your computer!

The two factors that are going to determine whether you get the most out of the EOS 5DS are the lenses you put on it and how carefully you use it. Canon recommend using their own L-series lenses launched in the last four years. I have the 16–35mm f/4 IS, 24–70mm f/4 IS and 70–300mm f/4–5.6 IS and all are capable of handling the resolution of the camera. Prime lenses from the likes of

Zeiss will also allow you get the very best out of that 50.6-megapixel sensor.

In terms of how you use it, the crucial thing to remember is that ANY error that could reduce image sharpness will stand out like a sore thumb, so you need to focus critically and make sure the camera is rock solid when the shutter is tripped. If you use it on a tripod, make sure it's clamped down tight, fire the shutter with a remote release and use the mirror lock-up. If you're handholding you must adopt a stable stance and use a shutter speed fast enough to combat any camera shake. This camera is so sharp that the tiniest amount of movement will be visible when you blow up the images. It's totally unforgiving and user-error is perhaps its main limitation. Get everything right, though, and the results will blow your mind. The EOS 5DS is a game-changer and has set a new standard that other manufacturers can only hope to match.

THE EOS 5DS OR EOS 5DS R?

Is it worth spending \$300 more to get the 'R' with its low-pass cancelling filter? Personally, I don't think it is. The images produced by the 5DS R are a little sharper than the EOS 5DS, but the EOS 5DS files are fantastically sharp in themselves, and if you feel it's necessary you can sharpen them to match the quality of the EOS 5DS R, whereas the EOS 5DS R files can't be sharpened so easily. With the EOS 5DS R, you also have the increased problem of moiré patterns, and though it shouldn't be a problem for general photography, because the resolution of the camera is so high, some users of the 5DS R are finding they get moiré patterns on any shot where fine repeated patterns are captured. I even heard of a wildlife photographer complaining he got moiré patterns on bird feathers in some images.

CANON EOS 5D MK III



CANON EOS 5DS R



IT'S ALL IN THE DETAILS: The same viewpoint shot on two different Canons and zoomed in to 100%. The difference in resolution is astounding.

VERDICT

**BEST
BUY**

I liked the EOS 5DS so much that I bought one. Not the EOS 5DS R tested here, but the EOS 5DS (see panel, above). The image quality alone was enough to justify the purchase and I haven't regretted my decision for a second. It's a joy to use and the results are stunning. I've never seen such detailed images from a DSLR. Use it with great care and good glass and you'll be amazed by the results. For now, it's the world's best DSLR.

Handling	19/20
Ease of use	19/20
Features	18/20
Performance	20/20
Value	19/20

Overall 95/100

FUJIFILM X-T10

With classic SLR styling, the compact and retro-looking X-T10 looks set to continue Fujifilm's trend for making highly popular mirrorless models

Test: DANIEL LEZANO

SPECIFICATIONS

Price (body only): \$850 (guide) / \$680 (street)
Image sensor: (APS-C) X-TRANS CMOS II
Resolution: 16.3-megapixels
Maximum image resolution: 4896x3264 pixels
AF: Hybrid (TTL contrast AF / TTL phase detection AF)
ISO range: 100-25600
Shutter speeds: 1/4000sec-30 seconds & Bulb
Continuous frame rate: 8fps
Built-in flash: Yes. Guide Number: 5 (ISO 100, m)
LCD monitor: Tilt-type 3in 920,000-dot
Storage: SD (SDHC/SDXC)
Size: 118.4x82.8x40.8mm
Weight: 381g (inc battery and card)

I'LL ADMIT IT, I've always preferred green to gold. If you're my age (you have my sympathy), you'll know what I'm talking about. Back when cameras were loaded with film canisters rather than memory cards, the two big players in film production were American superbrand Kodak (gold) and Japanese giant Fujifilm (green). While Kodak had the major market share, Fuji was the favourite with many consumers and pros.

Step forward a couple of decades and the once-supreme Kodak has all but disappeared. Fujifilm, on the other hand, is going from strength-to-strength, thanks to the growing popularity of its X-series premium compacts and Compact System Cameras. As in the days of film, followers of Fuji remain passionate and vocal about the brand, arguably more so than with any other camera system. Perhaps this is because the 'underdog' spirit has remained, or because Fujifilm is very proactive to listening to user feedback. Whatever the reason, I was glad to find out first-hand if the latest Fuji would live up to the hype. With many DSLRs being similar in terms of features and performance and having, how can I describe it, a somewhat 'sterile' operation, it would be good to see if the Fuji had its own special quality that would make it a pleasure to use.

In terms of design, the retro appeal of the Fuji X-T10 is certainly a winner. Its compact and lightweight body looks classic and expensive. Build quality is impressive too – while it may lack the weatherproofing of the more expensive X-T1, it retains a robust and solid feel. The three large top-plate dials help retain a traditional film SLR appearance and are nicely sized, with each click-stop having a reassuringly positive action. On the



CLASSIC SLR STYLING

The retro design of Fuji's X-series cameras has proven highly popular, so it's no surprise that the X-T10 has continued this successful trend.

right side are the exposure compensation and shutter speed/exposure mode dials. Between these sit the on/off switch and an Auto lever that allows you to instantly stick the camera into aperture-priority or program modes, along with a small red video record button. The main dial on the left side handles frame advance and a number of other shooting modes, including sweep-panoramic and exposure bracketing.

The rear of the camera has a neat arrangement of buttons running above and to the side of the LCD monitor. Fuji has clearly made access to functions a key priority. Press the Q (Quick) button to bring up a large number of icons, or use the MENU button at the centre of the four-way control for an alternative route to the heart of the camera's facilities. A Fn button on the bottom right corner lets you select from a number of modes (including ISO ratings), while two input dials with push-functions give further options. This choice can be a little bewildering when you first start using the camera but this is simply because Fuji is giving you a level of customisation and access to features that you'll not find on many cameras. Use it or ignore it as suits.

This depth of options (along with cost) may explain why the LCD lacks a touchscreen interface. While I've found this facility useful on other models, I don't think its omission is a major negative on the X-T10. The 3.2in LCD monitor itself is very good, with a clear, sharp display and a useful tilting platform. The electronic finder is excellent too, providing a very bright image and a

wealth of information. The camera can be left to switch automatically between the two when you place your eye to the finder or you can manually select one or the other. I found the auto-switching worked well.

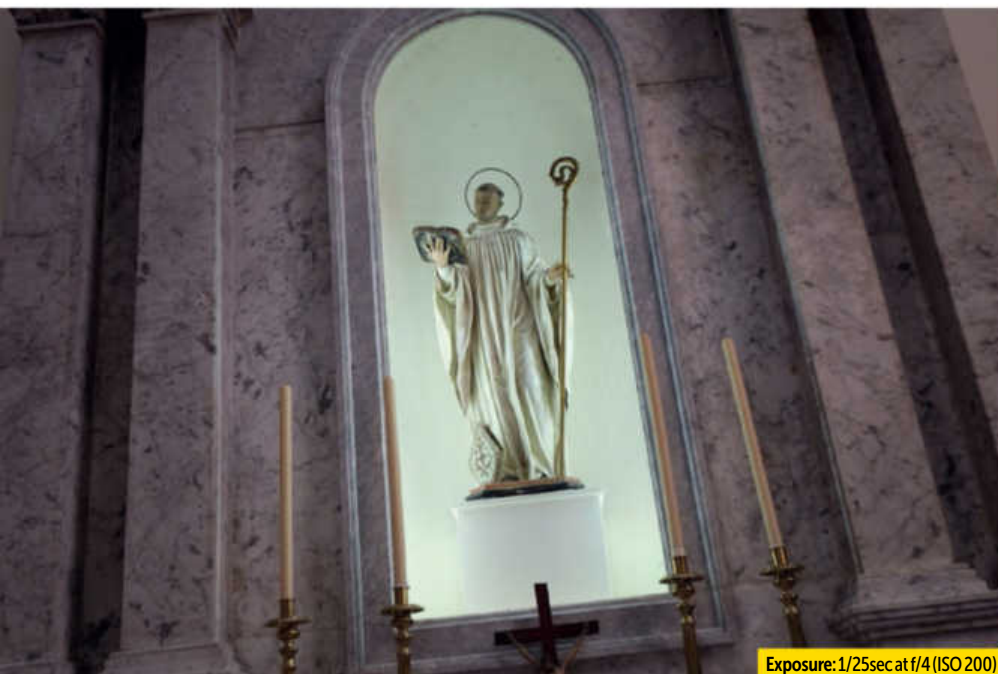
I found the X-T10 was relatively easy to use, the only issue was getting used to its way of operating as it's different to the majority of DSLRs. Once you have, you discover it to be a fast and enjoyable camera to use, with plenty of customisation on offer. It handles well too, with the smaller, lighter body balancing nicely with the supplied 12-24mm zoom. The body shape is far less curvy than DSLRs, with small, rubberised hand- and thumbgrips providing the only purchase. It wasn't an issue for me, but if you've very large hands and thick digits or plan to regularly use longer lenses, it's best to check first that you can live with the ergonomics of the X-T10.

As expected of a stripped-down version of the X-T1, the X-T10 shares many of the features found on its more expensive sibling, including the same 16.3-megapixel X-Trans CMOS II APS-C sensor and EXR Processor II. Considering the overwhelmingly positive feedback given to the X-T1's image quality, this can be seen as a good thing, although many would-be purchasers may consider the resolution as relatively low considering most rivals boast 20-megapixels plus. Full HD video recording is available, but not 4K. Unusually the minimum ISO rating is 200 but the nominal range of 200-6400 can be expanded to ISO 100-51200.

Unlike the vast majority of its rivals, the



Exposure: 1/710sec at f/6.4 (ISO 200)



Exposure: 1/25sec at f/4 (ISO 200)

Fuji does away with Scene modes, offering just program, aperture- and shutter-priority AE and manual. This is another indication of how Fuji is aiming this at the more creative photographer, rather than the mass-market ensemble. This for me is a smart move.

The exposure system is well catered for, with 256-zone, spot and centre-weighted metering patterns. Exposure compensation and bracketing options are also available.

The X-T10 boasts an intelligent hybrid autofocus system with a wide array of options. A switch on the front of the camera allows the standard choice of single or continuous AF, as well as manual focus. Depending on the AF mode setting, it uses 49 areas within a 7x7 grid or 77 areas within a 11x7 grid. You can choose to use individual points, groups of sensors or wide-area focus.

With Fuji having such a heritage in film, it's no surprise that you can shoot images that reflect classic Fuji emulsions such as Provia,

Velvia or Astia. Further in-camera processing is possible by selecting one of the Advanced Filter settings, such as Toy Camera, Pop Colour or Miniature, but in JPEG only.

There are numerous other features on the X-T10, such as built-in Wi-Fi, an interval timer and (unlike the X-T1) a built-in flash, so check Fuji's website for the full specification.

In terms of performance, the Fuji acquits itself well. The AF system has been updated slightly from the X-T1 and is fast and responsive. JPEGs are sharp and boast excellent colour rendition and contrast, with the multi-zone system proving consistent in most situations. Noise is very well controlled and you can shoot up to ISO 3200 and still capture images that are more than usable. It's not a perfect camera, but is there such a thing? In reality, the quibbles I have with it are minor and more than made up for by the enjoyability of using it. I can certainly see what all the fuss on Fuji forums was about.

X-T10 & X-T1: KEY DIFFERENCES

The X-T10 is essentially a stripped down version of the highly-popular X-T1. So what are the main differences between the two models? Well, first off there's the price: the X-T10 costs around \$700 body-only while the X-T1 is around \$1300. That's a considerable difference. Both have a magnesium alloy body but only the X-T1 has weatherproofing. On the plus side the X-T10 has seven custom functions compared to the X-T1's six and boasts a built-in flash. It's also slightly lighter (381g compared to 440g). However, the X-T1 has a superior electronic finder with a 0.77x magnification – the X-T10 is 0.62x. The LCD monitor on the X-T1 is a higher resolution too, with 1,040,000 dots as opposed to 920,000 dots on the X-T10. Apart from a few tweaks to the controls and the fact that the X-T10 is available in black or silver, as opposed to black or graphite on the X-T1, there aren't any other major changes.

CLOSEST RIVALS

● **CANON EOS 750D:** Tested Sept 2015. Test rating 93%. Canon's update of the popular EOS 700D can be picked up with a standard zoom for under \$1200, making it great value. It boasts a 24.2-megapixel APS-C sensor, a powerful DIGIC 6 processor and neat handling, along with Canon's reliability in terms of performance.

● **SONY ALPHA 6000:** One of Fuji's key CSC rivals, the Sony has a very sleek, compact body and boasts stacks of creative features. A 24.3-megapixel APS-C HD CMOS sensor means it has a much higher resolution than the Fuji and can be bought for around \$800 with kit zoom.

● **NIKON D5500:** Delivers fantastic image detail thanks to a lack of optical low-pass filter, the \$900 Nikon boasts a 24.2-megapixel resolution and access to the extensive NIKKOR lens range.

● **OLYMPUS OM-D E-M10:** Much like the Fujifilm X-T10, the Olympus is a CSC with retro SLR styling, built-in Wi-Fi and a 16-megapixel resolution. Popular with travel photographers. You can pick up one of these for around \$700.

VERDICT

I've really enjoyed using the X-T10. It reminded me of using a 35mm film SLR. In an age where almost every camera is going to deliver great results, it's good to see cameras that break the mass-market mould. Fuji's X-T10 is one of them – when talking about it you can't help but bring emotion into it rather than straight analysis. As I said, it's not perfect, but in terms of user-satisfaction, it's up there with the best.

Handling	18/20
Ease of use	18/20
Features	17/20
Performance	17/20
Value	18/20

Overall 88/100

HIGHLY
RATED



TEST UPDATE

As we went to press, we were given a preview of the Photix Pro Indra TTL system – our initial impression is very favourable – expect a test soon!

LOCATION FLASH

FOR LOCATION SHOOTING IN BRIGHT CONDITIONS, THE RULES CHANGE. TO GO INTO BATTLE WITH DAYLIGHT, AND WIN, TAKES A SPECIAL KIND OF FLASH. HERE ARE FOUR WEAPONS OF CHOICE THAT WILL NOT BREAK THE BANK.

Test: RICHARD HOPKINS

SHOOTING WITH FLASH outdoors presents a unique set of challenges. Obviously mains sockets are thin on the ground out in the real world, so that means battery power. And while flashguns look like a handy answer (and they are for a lot of things), the other problem is the amount of flash power you need. Daylight is very bright, and even on a dull day it's surprising how much power it takes just to balance flash with ambient light, let alone over-power the sun and get those moody dark backgrounds that really make location flash work so distinctive.

That's not all. When working outdoors, often the distances involved are greater and might include action subjects that need fast flash durations to freeze movement. It all adds up to a combination of factors that really demand a custom-designed flash unit for location work. As a very rough rule of thumb, it takes around 400Ws of power (that's maybe four flashguns) to have a chance of good results when using softboxes outdoors for nice quality light, though even that will struggle in bright sun. Outdoors there's not really any such thing as too much flash power!

Until recently, location flash used heavy lead-acid batteries, but today's lithium-powered heads are much lighter, last longer, and have fast recycling times right up to the last pop. The iLux 600C reviewed here even has the battery pack fitted inside the head, yet it weighs no more than a typical mains-only studioflash and can still muster hundreds of flashes at high-power settings.

For active subjects, fast flash durations are important to freeze movement. This can be a complicated topic, and very often all is not what it seems with manufacturers' claimed durations, quoted as 't.5 time' figures. This is not made any less confusing now that there are two quite different types of flash unit available on the market.

There are voltage-regulated units, like the Bessel and Lencarta Safari-2, and traditionally this is commonly used for studioflash heads. Flash durations are not the fastest, though they're quickest at maximum power, which is handy. Then there are IGBT heads (insulated-gate bipolar transistor – as used in all flashguns) such as the iLux 600C and Lencarta Atom 360, that are capable of exceedingly fast flash durations, but only at lower power outputs. In both cases, the t.5 times can be

misleading so we've levelled the playing field with a test that compares all flash durations directly against actual shutter speeds.

There are other models available, such as Elinchrom's highly-regarded Quadra, but these are more expensive and will feature in a future test of premium location flash.

HOW WE DID THE TESTS

- **POWER:** Tested with our standard procedure, by firing into a Lastolite 95cm Umbrellabox and metering brightness at 1.0m, this gives an accurate and reliable measure for comparing all types and brands of flash unit on a level playing field. Brightness is expressed as an f/number at ISO 100 plus a decimal, eg f/16 + 0.5 is exactly halfway between f/16 and f/22. As a rough guide, that figure is close to what you'd normally expect from a 400Ws flash unit. Modelling lamp brightness is measured in the same way, given in EV (Exposure Value). For comparison, 5.0EV equates to camera settings of 1/4sec at f/2.8, ISO 100.
- **RECYCLE TIME:** An average of five flashes, with a freshly-charged battery. Note that with some units, the flash-ready light can show slightly before full charge is actually reached. The times given are at 100% full charge.
- **FLASH DURATIONS:** Flash durations quoted by manufacturers are usually the industry standard 't.5 time' but compared to real shutter speeds this is notoriously inaccurate, particularly with voltage-regulated units that can sometimes over-state the actual action-stopping ability by as much as 3x, ie a t.5 time of 1/1000sec could be similar to 1/350sec shutter speed. In this review, flash durations were tested using a fast-spinning target, with results compared against images taken at high shutter speeds in ambient light. This is a good and realistic method up to 1/8000sec, the control camera's maximum.
- **COLOUR:** None of these flash units presented any significant colour problems. Accuracy was tested with a Macbeth colour chart, and rated for variations from daylight at 5500K, and also for colour consistency with changes through the power range. A change of up to 250K rates 'excellent' and is hard to detect; a shift of 250-500K rates 'very good' and is subtle, only really visible in side-by-side comparisons; 500-750K variance is noticeable, rating 'good' though it's rarely an issue and easily corrected in post-processing; a shift of more than 750K or more rates 'fair' and will usually need slight adjustment for best results.

Key Features

FLASH HEAD

- 1) Flash tube: Emits the flash light.
- 2) S-type modifier mount: For fitting softboxes and modifiers.
- 3) Modifier release catch: Releases the modifier lock catch.
- 4) Modelling lamp: LED lamps use less power and generate less heat.
- 5) Internal fan cooling: Keeps the unit cool during heavy operation.
- 6) HT lead input: Connects up to the battery pack.
- 7) Tilt lock: Adjusts the up/down angle of the flash.
- 8) Stand lock: Secures the light onto a light stand.
- 9) Umbrella shaft: To attach umbrella accessory.
- 10) Positioning handle: For guiding into position.

POWER PACK

- 11) HT output: High-voltage cable to head.
- 12) Ready light: Charged and ready to fire.
- 13) LED display: Shows power and other settings.
- 14) Output: Sets power in fractions per stop.
- 15) Buzz: Turns the recycle beeper on/off.
- 16) Lamp: Turn modelling light on/off.
- 17) Mode: Selects normal sync/s1/s2.
- 18) Power button: Switches on/off.
- 19) Test: Manual test firing.
- 20) Battery pack: Quick-detachable.
- 21) Charge port: For battery charging.
- 22) Radio control: USB port for custom trigger.
- 23) Sync: Standard 3.5mm sync socket.
- 24) Battery status: Remaining charge time.



Bessel WP6ii-600 \$1050

SPECIFICATIONS

Price: \$1050
Power: 600Ws (voltage-regulated)
Light output (ISO 100): Max power f/16 + 0.5, min f/8 + 0.5. Range 2.0 stops
Recycle time: Max power 4.0secs, min 0.8secs
Battery: 371 max power flashes, 4500mAh lithium
Flash durations: Max power 1/700sec, 1/4 power min 1/500sec
Colour: 5300K +/- 100K
Triggering: 1/4in sync socket, optical slave
Modelling lamp: 35W halogen, fixed brightness 1.3EV
High Speed Sync: No
Modifier fitting: S-type
Dimensions - power-pack: 28x20x11cm (main body)
Weights: Power-pack 3.5kg. Head 0.9kg
Cable: 2.3m
Supplied: Case, standard reflector, grip, charger
Spare battery: \$200
Warranty: One year
Website: www.bessel.co.uk

BESSEL IS WELL KNOWN for its good range of studio equipment at competitive prices. Rated at 600Ws maximum output, the WP6ii-600 offers a lot of punch for \$1050. The power-pack is slightly larger and heavier than the similar Lencarta Safari-2, though at 3.5kg there's not much in it. Push-button controls cover the basics, and oddly there are two that actually do nothing, marked F and L. A bright red LED display shows power with settings

from 1.0 to 8.0, suggesting a larger range than the two stops available – there is only full-power, half-power, and quarter-power minimum. The battery is housed under a flap and this is one of a few areas that need a re-think. It's quite easy to put the battery in the wrong way and damage the contacts, especially after giving it the firm shove it needs. More seriously, it's hard to remove for recharging and the flimsy pull-tags on the test model soon broke, leaving the battery permanently stuck inside, not good!

Maximum power measured f/16 + 0.5 at ISO 100, which is down on what you might expect from 600Ws, but still a hefty wallop. The recycle beep sounds at around one second regardless of the power set, though it actually takes four seconds to recharge fully, reducing to a handy 0.8 seconds at quarter power. Colour is 'excellent'; flash durations are in line with other units using voltage-regulated power; the 4500mAh battery delivered 371 full-power flashes. The modelling lamp is very weak, however.



VERDICT

Despite the decent power output and attractive price, the Bessel WP6ii-600 cuts a few too many corners and disappoints overall. We've been told that a redesign of the battery compartment is being looked into.

Build quality	★★☆☆
Features	★★★★
Performance	★★★★
Value	★★★★
Overall	★★★★

iLux Summit 600C \$1400–\$1500**SPECIFICATIONS**

Price:	\$1400 S-fit, \$1500 EL-fit
Power:	600Ws (IGBT-regulated)
Light output (ISO 100):	Max power f/22 + 0.4, min f/2.8 + 0.3. Range 6.1 stops
Recycle time:	Max power 6.5secs, min 0.1secs
Battery:	375 max power flashes, 6000mAh lithium
Flash durations:	Max power 1/200sec, 1/8th power 1/3000sec, min power faster than 1/10000sec
Colour:	5700K +/- 300K
Triggering:	Built-in radio, 3.5mm sync, optical slave
Modelling lamp:	5W LED, fixed brightness 3.3EV
High Speed Sync:	No
Modifier fitting:	S-fit or EL-fit
Dimensions:	6x13cm diameter (main body)
Weight:	2.5kg inc reflector
Cable:	n/a
Supplied:	Metal case, standard reflector inc diffuser, radio trigger, handle-grip, charger
Spare battery:	\$225
Warranty:	Two years
Website:	www.shop.photomart.co.uk

IT SOUNDS LIKE the perfect package – all-in-one unit, generous 600Ws output, ultra-fast IGBT controlled flash durations, LED modelling lamp, light 2.5kg weight, over 1000 pops per charge (at half-power) and some cool multi-flash/strobing options, too. It looks like a Profoto B1 at a bargain price, and actually the iLux 600C does a pretty good impression, though it lacks the Profoto's auto-TTL exposure control and

true high-speed sync capability.

First impressions are the high build quality and surprisingly light weight. Though it comes with handle-grip that doubles as a stand mount, it's really better off on the latter. Power output measured a thumping f/22 + 0.4, generous for 600Ws, though the penalty for that is a recycle time of 6.5 seconds. However, with so much power on tap, it still has plenty of poke for most things at half output, and that drops the recycle time to a nifty 2.1 seconds.

As is sometimes the case with IGBT units, the flash duration at full-power is quite long at 1/200sec (though that's good for tail-hypersync technique, with a suitable trigger) but it gets much faster very quickly. At half-power it's 1/600sec, at quarter-power 1/1600sec, down to less than 1/10000sec at minimum output. Colour quality holds on very well, despite the unusually wide 6.1 stops power range, rating 'excellent' for accuracy and 'excellent' for consistency at high and mid-range outputs, only showing a hint of blue at low power. Unfortunately, the LED modelling lamp is rather feeble at only 3.3EV.

**VERDICT**

We're getting used to excellent products from iLux. Here's another, with big power and fast flash durations, plus cable-free convenience and versatility. Good value too, available in either S-fit or EL-fit.

Build quality	★★★★★
Features	★★★★★
Performance	★★★★★
Value	★★★★★
Overall	★★★★★

Lencarta Atom 360 \$950**SPECIFICATIONS**

Price:	\$950
Power:	360Ws (IGBT-regulated)
Light output (ISO 100):	Max power f/16 + 0.4, min f/1.4 + 0.3. Range 7.1 stops
Recycle time:	Max power 5.2secs, min 0.05secs
Battery:	448 max power flashes, 4500mAh lithium
Flash durations:	Max power 1/500sec, 1/8th power 1/4000sec, min power faster than 1/10000sec
Colour:	6000K +/- 150K
Triggering:	3.5mm/PC sockets, optical slave.
Modelling lamp:	No
High Speed Sync:	Yes (with suitable trigger)
Modifier fitting:	Atom specific. (Optional S-fit adapter)
Dimensions:	Head 21x9x8cm (head vertical, main body)
Weight:	1.6kg inc cable, reflector and battery unit
Cable:	60-95cm approx
Supplied:	Standard reflector plus diffuser, mini stand and tripod adapter, charger
Spare battery:	\$260
Warranty:	Three years
Website:	www.lencarta.com

DESPITE THE FLASHGUN-style design, the Lencarta Atom 360 is manual control only with no Auto-TTL, though it does offer proper high-speed sync and strobo multi-flash. There's a hotshoe for use on-camera, though it's better off in your hand or



on a stand. There are two 1/4in mounting bushes, or an S-fit adapter (\$60) that works well for softboxes and beauty dishes, especially with the bare-bulb flash tube.

Power is exactly on target for 360Ws, measuring f/16 + 0.4 and roughly equivalent to three or four flashguns. In high-speed sync mode, maximum effective power inevitably drops (varies by camera and sync timing), but the Atom still holds a similar advantage over flashguns, making it much more usable in reality. HSS requires a different trigger though, not the optional Lencarta Wavesync, such as a Yongnuo 622.

The battery is a little gem. Small and light at only 570g, it recycles the Atom 360 to full power in 5.2 seconds (the beeper sounds a little ahead of 100% charge). But add the optional Power Doubler cable (\$60) and that time is slashed in half. The 4500mAh battery delivered a very creditable 448 full power flashes, and can be used to power other flashguns too.

Flash duration at full-power measured 1/500sec, but then the IGBT control steps in, cutting that to 1/900sec at half-power, 1/2000sec at quarter-power, 1/4000sec at eighth-power and so on down to incredibly short times. Both colour accuracy and consistency rate 'very good'.

**VERDICT**

Never has so much power been squeezed into such a compact, portable, versatile and capable package. It's well-priced too, though needs a few additional accessories to realise its full potential.

Build quality	★★★★★
Features	★★★★★
Performance	★★★★★
Value	★★★★★
Overall	★★★★★

Lencarta Safari-2 \$1500

SPECIFICATIONS

Price: \$1500
Power: 600Ws (voltage-regulated)
Light output (ISO 100): Max power f/16 +0.9, min f/4 +0.0. Range 4.9 stops
Recycle time: Max power 1.9secs, min 0.3secs
Battery: 373 max power flashes, 8000mAh lithium
Flash durations: Max power 1/1100sec, 1/8th power 1/750sec, min power 1/600sec
Colour: 5600K +/- 200K
Triggering: TX and RX units included with remote power control, 3.5mm sync socket, optical slave
Modelling lamp: 15W LED, fixed brightness 5.2EV
High Speed Sync: No
Modifier fitting: S-type
Dimensions: Power-pack 23x17x8cm (main body)
Weights: 4.5kg inc cable, reflector and power-pack
Cable: 2.9m
Supplied: Metal case, shoulder bag, TX/RX triggers, standard reflector with diffuser, charger
Spare battery: \$290
Warranty: Three years
Website: www.lencarta.com

THE ORIGINAL LENCARTA Safari earned a reputation for all-round performance and price, and the Safari-2 is not just an improved version, it's completely new. The redesign follows the style of the Elinchrom Quadra, though with more power and a bit more weight, at a much lower price. The Safari-2 comes with the Wavesync transmitter and USB-plug-in receiver units for triggering and remote power control, plus a shoulder bag for the 3.1kg power pack.

The build quality has gone up a notch, and the Safari-2 is well-designed and solidly constructed. Power checked out at a healthy f/16 +0.9, exactly what you'd expect from 600Ws, reducing over a good 4.9 stops range. We got 373 full-power flashes from a freshly charged battery. Recycling is fast, taking 1.9 seconds at full-power, 1.1 seconds at half-power, and getting steadily quicker. Power output is voltage-controlled, like almost all regular studio heads, giving flash durations of 1/1100sec at max power, increasing slightly at lower outputs to 1/600sec at minimum. These figures are longer than Lencarta's t.5 claims. Colour accuracy rates 'excellent' with 'very good' consistency down to 1/32 power.

The fan-cooled head is big and heavy at 1.4kg (inc cable) though robust and with a locking mechanism capable of holding a decent size softbox. The LED modelling lamp was the brightest on test and is certainly usable, if not dazzling at 5.2EV. In fact, the Safari-2 could double up as a decent studio head, too.



VERDICT

With plenty of power, fast recycling, accurate colour and a usable modelling lamp, the Lencarta Safari-2 makes few concessions to mains-free operation. It's well made and well-priced too.

Build quality	★★★★☆
Features	★★★★☆
Performance	★★★★☆
Value	★★★★☆
Overall	★★★★☆

BEST
BUY



iLux Summit 600C



Lencarta Atom 360



Lencarta Safari-2

Test conclusion

THIS IS NOT an easy comparison to judge, and that's reflected in some very close scores and three Best Buy recommendations. There are three quite different design concepts featured, each with its own strengths that can really only be judged by the potential buyer and intended use. One thing they all have in common though is big power, in handy portable packages, at very attractive prices compared to a few years ago.

The iLux Summit 600C is an amazingly neat and compact unit, and completely cable-free with a

built-in battery. It's also the most powerful, and though that comes at the cost of a longer recycle time, turning the power down to half still delivers as much light as most others with the recycle time cut dramatically, plus a faster flash duration. Also available in S-type or Elinchrom fittings.

Like the iLux, the Lencarta Atom 360 is IGBT controlled, meaning very fast flash durations at lower power, plus great High-Speed Sync (HSS) capability (with a suitable trigger). Despite the small size, it has genuinely high-power output, and the Atom is part of a comprehensive and well thought-out system. With

one accessory or another, the Atom can turn its hand to just about any task. While it looks like a flashgun on steroids, it's actually a lot more than that and for all-round versatility and value, it takes some beating.

The Lencarta Safari-2 is a relatively conventional two-part location flash, similar in basic concept to some other brands. It has the power, solid build quality and all-round performance, though there's nothing to touch it for the price. It's also the only unit with a modelling lamp that is actually any use in the real world, and the Safari-2 could double up as a studioflash, certainly occasionally.

LUMIX DMC-CM1

Is it a phone? Is it a camera? Is it worth replacing your iPhone 6s? We help you decide whether the CM1 can deliver on all fronts.

Text and images: TRENT VAN DER JAGT

SPECIFICATIONS

Price: \$1399
Sensor size: 1-inch
Resolution: 20.1 Megapixels
Sensor type: High Sensitivity MOS
Image Processor: Venus Engine
Display: 4.7-inch TFT LCD monitor
Autofocus points: 23
Image format: JPEG and RAW
Max video resolution: 3840x2160 at 15fps. 1920x1080 at 30fps.
Lens: Leica 10.2mm – f/2.8
Digital zoom: 4x
Focal length equivalent: 28mm
Shutter speed range: 1/16000 – 60secs
ISO range: 125 – 12800
Phone software: Android 4G enabled
Size: 13.54cm x 6.8cm x 2.11cm
Weight: 204g
Website: panasonic.com/au

THERE'S NO DENYING that smartphones have a monopoly on our pockets. Every year they are getting slimmer, faster and most importantly, improved cameras. So, is there room for Panasonic's latest camera phone hybrid? Yes and no. The CM1 is a fantastic compact camera that is great for your pocket and everyday shooting, but as for the phone itself, sacrifices were made.

The CM1 has an impressively large sensor for its size (1-inch) and a resolution of 20.1 Megapixels, allowing for some stunning shots in both jpeg and Raw. But the question is whether or not this is a decent phone too. Panasonic hasn't officially called it a phone yet, referring to it as a "communication camera", which makes sense, as anyone buying this as a phone with a beefed up camera may be a little disappointed. There is certainly a lot more camera here than phone. The design is undeniably all camera, with a beautiful leather-style rubber housing the well-built metal body. It's light, comfortable and packed with features any photographer would be impressed with. Meanwhile, the phone aspect itself runs on android 4.4.4



and supports 4G, but isn't breaking any ground compared to most other top-end phones at the moment. This may not be a problem at all for some since this is being marketed primarily as a camera, but for day-to-day use, its size and build can become a bit cumbersome and bulky compared to other smartphones.

The next hurdle is the price tag. At \$1399, it is well beyond any similar phone or camera in its field. What you are paying for is the 4.7-inch 1080p display, 2.3GHz quad-core processor and the ease of having a great little rig ready to shoot at the touch of a button, literally. The CM1 includes a button that switches things over to camera mode and engages the fixed Leica 10.2mm – f/2.8 lens. The camera itself performs quite well, delivering considerably sharper images than a typical phone, and has the specs to match competitors such as the Sony RX100 series – but despite a great sensor, the lens quality is a little lower compared to its competitors.

Whichever way you cut it, this is a great compact camera that can rival many its market. It produces great images with little noise, accurate colours and a much higher quality than smartphones, and its build is sleek, stylish and comfortable. As a phone, however, it scrapes through as a mid-range device, but you probably aren't buying it for its telephonic purposes anyway.

Panasonic has done their best to create one of the first truly hybrid devices with an excellent camera, great design and acceptable smartphone capabilities. There are areas that have taken a hit, like video quality which can be quite low and battery life which barely got us through the day. When you've got both worlds colliding in your pocket, some things will go right and some remain average. Until we can have larger sensors in our current smartphone builds, then this amalgamation just isn't practical enough.



VERDICT

If you are happy to make some sacrifices in your day-to-day phone in order to have a great little compact camera at the ready, then there's nothing quite like the CM1. But while it performs well as both a camera and a phone, it's not hitting the nail on the head for either.

Build Quality	18/20
Features	12/20
Performance	12/20
Value	8/20

Overall 63/100



Manfrotto 190 Go!

Aluminium / Twist locks / Easy Link socket / Fast switch to horizontal column position

Test: DANIEL LEZANO

SPECIFICATIONS

Guide Price: \$350 / Street Price: \$350

Material: Aluminium

Number of leg sections: Four

Leg angles: 25°, 46°, 66° and 88°

Maximum height (without centre column): 122cm

Maximum height: 146cm

Minimum height: 7cm

Length closed: 45cm

Maximum load: 7kg

Size (WxL): 69.2x39.3mm

Weight: 1.66kg

Website: www.manfrotto.com

MANFROTTO HAS DOMINATED the world of tripods for decades, offering an extensive range catering for casual snappers through to professionals. The 190 series is one of its most popular with hobbyists and enthusiasts, with a number of carbon-fibre and aluminium models to choose from. The 190 Go! is the latest version and boasts a number of design changes that aim to improve ease and speed of use, as well as making it the lightest and most compact 190 model in the aluminium range.

As with all Manfrottos, the 190 Go! is very well constructed, with all the controls having a positive, assured feel. Unlike other models, the legs feature twist locks rather than the more traditional Quick Power locking levers. My personal preference is for the twist type, which I find faster and easier to loosen and lock, so this is a welcome change. From its stored position, it's possible to loosen all the locks on a leg with one hand at once, making it much quicker to extend the legs when setting up in a hurry. At the top of each leg is a lock with a pull-down button that allows you to change leg angles, simply by pushing the leg in slightly then pulling down the locking button and extending the leg. Each leg can be individually angled to one of four settings, including an 88° setting for shooting with the tripod close to ground level. To make this easier, the centre column can be quickly positioned horizontally by loosening the locking knob, pushing the button on the base of the column and raising it until the dark red inner collar appears. Then, you rotate the centre column, slide it through the aperture and lock. While this sounds complicated it really isn't and only takes a matter of a couple of seconds, with a reverse of this process quickly returning it to its standard position.

To add to its versatility, the 190 Go! features an Easy Link socket on its collar, for attaching additional accessories like



Manfrotto's accessory arms, while a hook on the opposite side allows you to hang a bag for additional stability and/or add a strap. One other feature of note is that the top section of one of legs has a thick, rubberised panel that aids grip and ensures you're not forced to hold a very cold leg when using the tripod in cold conditions.

I found the 190 Go! to provide a very stable platform. It doesn't come with a head, so I tried it with my favourite, a 322RC griphead, and a range of cameras. The heaviest outfit was a Canon EOS 6D with 70-200mm f/4 telezoom, which falls well within the tripod's payload. Unless you've a particularly heavy outfit, you shouldn't have any problems as stability is excellent, even with the legs at full length and the column extended.

The maximum height falls short of rivals, so this could be an issue to some, although I didn't find any major limitations at its 1.22m maximum setting, while the quick switch to low-level shooting is a real bonus. As someone who usually uses carbon-fibre, I found the weight of the 190 Go! slightly heavier than normal, although at 1.66kg, it compares favourably to its main rivals. All in all, a very tidy performer.

VERDICT

This is a welcome addition to the 190 range, with the switch to twist locks a particularly pleasing change. It's a very reasonably priced model that is fast and easy to use and offers excellent stability.

Build quality	★★★★☆
Features	★★★★☆
Performance	★★★★☆
Value	★★★★☆
Overall	★★★★☆

Samsung Portable SSD T1 500GB

Solid State Drive / USB 2.0 & 3.0 / 250GB, 500GB & 1TB / Up to 450MB/sec / 256-bit encryption

Test: DANIEL LEZANO

Price: \$320

Contact: www.samsung.com

PORTABLE HARD DRIVES are an ideal choice for backing up your image library to a high-capacity, easy-to-use source that you can take everywhere. However, when it comes to speed and size, no current external drive comes close to this Samsung. By using Solid State rather than traditional hard disk technology, the SSD T1 provides incredibly fast data access and transfer in a unit that's far more compact (71x9.2x53.2mm) and lightweight (28 grams). The T1 comes with a neat 5in USB lead and is supplied with an easy to use high-encryption software for password-protection.

Samsung claims the T1's 3D V-NAND technology provides read/write speeds of 450MB/sec and our tests came close to this figure. A 50GB transfer of Raw files to the T1 via USB 2.0 took 28 minutes and 22 minutes from the Samsung to the computer. That's fast – the same transfer to a WD Passport HDD took over 40 minutes.

The only real drawback of the SSD T1 is its price. As with any new technology, there is a price premium – street prices of the T1 versions are around \$500 (1TB); \$320 (500GB) and \$180 (250GB), which compares to around \$100 for a 1TB WD Passport portable drive. I'd say the 1TB will need to drop to around \$300 or so for widespread appeal to photographers/videographers.

Not everyone needs such speed but those handling high volumes of Raw files or HD/4K Video, or who wish to leave the T1 attached for constant access, may find the unrivalled speed benefits of this SSD drive a major benefit worth the additional cost.

HIGHLY RATED



VERDICT

In terms of speed, size and general performance, the Samsung T1 is in a league of its own. The price is inhibitive but is sure to fall over the coming months. If you need the smallest and fastest, go for the T1.

Overall

★★★★☆


**HIGHLY
RATED**

Tamrac Anvil 23

Rugged backpack / Lightweight design / Flight-friendly / Easy to configure

Test: JORDAN BUTTERS

Price: US\$290

Contact: www.tamrac.com

WHEN TAMRAC FILED for bankruptcy last year, it looked like we would lose one of the most popular camera bag brands. Thankfully, Utah-based Gura Gear stepped in and took over – the first step in the process was clearing out the old range of bags and creating a new line-up.

The Tamrac Anvil is the first backpack in the new range. Available in three standard sizes for use with pro DSLRs and two slim sizes for smaller outfits, it aims to offer large capacity, light weight, comfort and protection. My review sample is the Anvil 23 – the mid-sized standard model.

This is more than a rebranding exercise too – the Anvil is a noticeable 30% lighter than the old Expedition model. The Anvil's interior is spacious and configurable – there's enough room for two pro DSLR bodies and an ample selection of glass and accessories. The foam dividers offer protection without being bulky and the bag also accepts a 15in laptop in its front compartment, with two further butterfly compartments for smaller items.

The Anvil 23 is flight-friendly too – I've taken mine on four trips abroad so far and each time has been hassle-free, even when using budget airlines notorious for meagre cabin baggage allowances.

It's the attention to detail that makes the Anvil stand out. The bag is 2x PU coated for weather protection, and the included rain cover is fully seam-sealed too. Tamrac has used quality

components, such as YKK zips and has avoided potentially environmentally damaging materials such as PVC. Side compression straps hold the bag's shape and prevent things from moving around inside and the main straps themselves are comfortable padded airmesh affairs. The Anvil also includes a wide waistbelt that is both comfortable when attached, yet completely removable too. Wearing the Anvil 23, even fully loaded, is surprisingly comfortable – not something that I can claim of many big bags. What's more, once removed, the waistbelt itself can be used with the new Tamrac Arc pouches and cases – essentially you're getting a free utility belt with every bag.

There are however a couple of areas for improvement I feel – there's no external bottle holder or pouch for one, although you can purchase one that attaches to the side mounting straps if desired. The Anvil isn't a 'quick access' bag either, but then big bags rarely are – it is designed for lugging your gear from A to B, rather than constantly getting items in and out at a moment's notice.

VERDICT

On the surface the Anvil looks like many other bags, but once you take into account the quality of the components and materials used, and the comfort offered by a bag of this size, it starts to really stand out.

Build quality	★★★★☆
Features	★★★★☆
Performance	★★★★☆
Value	★★★★☆
Overall	★★★★☆



OP/TECH Utility Sling-Duo

Neoprene strap / Uni-Loop mounting system / Quick release

Test: JORDAN BUTTERS

Price: US\$50

Contact: optechusa.com

STANDARD CAMERA STRAPS are usually uncomfortable and flaunt your chosen allegiance to everyone. American brand OP/TECH is my usual strap of choice – their neoprene straps are durable, comfy and stealthy, so my curiosity peaked when I heard of a dual sling-style strap for carrying two DSLRs at the same time.

The OP/TECH Utility Sling Duo offers the same neoprene neck strap and quick detach system as the single strap. Rather than utilise the camera's tripod mount, which can prevent you from fitting a tripod plate, it attaches to your camera's traditional shoulder lugs using a Uni-Loop connector, which is supposed to make it easier to attach the strap. I found this true on Nikons and Fujis, however Canons have smaller shoulder lugs which make fitting the Uni-Loop connector much more fiddly.

The sling loops through just one shoulder lug, as opposed to both. I find this disconcerting and I'm not sure if a single lug is designed to hold all your kit's weight, but OP/TECH state that the sling is up to the task. You can use both lugs if you wish, however this makes things very awkward as the quick-release clips get in the way of the viewfinder and LCD screen. The sling does allow you to quickly remove one of your two bodies by simply unclipping one strap – a useful feature if you need to lighten the load.

VERDICT

Good build quality and finish as you'd expect from OP/TECH but the design doesn't sit well with me. I'm not happy with hanging a heavy body and glass from a single shoulder lug and clip.

Overall

★★★★☆

6 WAYS TO MAXIMISE SHARPNESS

WANT THE VERY BEST IN SHARPNESS AND DETAIL FROM YOUR IMAGES? MAKE SURE YOU KNOW ALL THE TRICKS!



1 TRIPOD: When setting up your tripod, make sure that the feet are spread out for stability and press the tripod down into the ground, especially if shooting on a soft surface, such as mud or sand.



2 REMOTE: The act of physically pressing the shutter button can cause enough shake to diminish sharpness, especially at slower shutter speeds. Using a wireless or cabled remote release prevents this.



3 MIRROR LOCK-UP: Vibration from the camera's mirror moving can cause loss of sharpness. If available, Mirror Lock-up moves the mirror on first shutter press, and releases the shutter on the second press.



4 SHUTTER SPEED: For handheld shooting, the reciprocal rule helps eliminate shake. Simply match the shutter speed to the focal length. For example, on a 50mm lens, 1/50sec or faster should eliminate shake.



5 CLEAN LENSES: Dirty optics or filters can have a big effect on sharpness. Remove any dust using a blower or soft brush. Stubborn marks can be addressed using lens cleaning fluid and a microfibre cloth.



6 USE LIVEVIEW TO FOCUS: Autofocus is fantastic, but nothing is as accurate as the human eye. When shooting from a tripod, use LiveView to zoom right in on your subject and check for accurate focusing.

VIDEO OF THE ISSUE

Harnessing the Sun

by RocketJump Film School

If you enjoy taking portraits then sunlight should be your closest ally. It's available all year round (excluding geographical extremes) and, best of all, it's free!

It is, however, trickier to control than man-made light, putting your shoots at the mercy of nature to a certain extent. Although aimed at video shooters, this light-hearted five-minute video from RocketJump Film School contains some useful basic guidance to shooting during daylight hours that applies to stills photographers too. As well as identifying the positive and negative traits that come from shooting at different times of the day, the team also go on to show you some handy DIY hacks for diffusing and reflecting natural light. If you're a seasoned portrait pro then this might not be news to you, but for anyone needing a refresher course, or wanting to pick up the basics of using natural light, this is an entertaining and informative watch. See for yourself here: http://bit.do/sunlight_DSLR



Flickr

Perseid Over Llanddwyn

by Peter Greig

www.flickr.com/photos/stlnkypete/

If you've ever been to Anglesey in the UK, you'll know why it's getting a reputation for being a hotspot for astrophotography – it's all thanks to the island's low levels of light pollution. Reader Peter Greig recently took a drive to Llanddwyn on the island to shoot the Perseid meteor shower and came away with this cracking shot of the Milky Way and a meteor above the lighthouse.

Canon EOS 70D with Samyang 14mm f/2.8 IF ED UMC
Exposure: 30 seconds at f/2.8 (ISO 1600)

“THE ONLY PHOTOGRAPHER
YOU SHOULD COMPARE
YOURSELF TO IS THE ONE
YOU USED TO BE”

Unknown

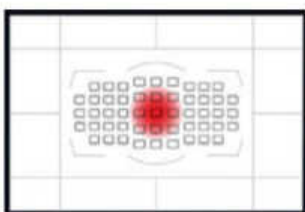
Photo Fact: Did you know?

If you think you've got Gear Acquisition Syndrome think again – Dilish Parekh of Mumbai, India, has been collecting cameras since 1977 and now boasts the largest collection in the world. At last count he's the proud owner of more than 4425 cameras!

SOURCE: GUINNESS WORLD RECORDS

JARGON BUSTER Metering modes explained

HOW DOES A CAMERA JUDGE THE RIGHT EXPOSURE? IT ALL DEPENDS ON THE METERING MODE YOU CHOOSE



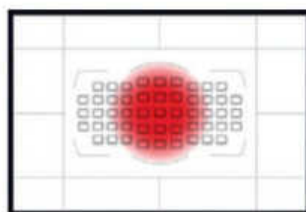
SPOT METERING

Meters light from a small circular area. On Canon bodies (except EOS-1D series) this is always at the centre AF point. On Nikon bodies, spot metering position is linked to the position of the active autofocus point.



BRETT HARRNESS

BEST FOR: Portraits or subjects with known mid-tone



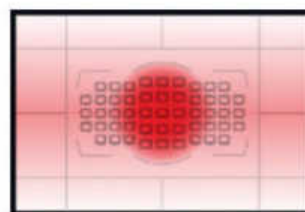
PARTIAL METERING

Measures and takes into account light levels from a large area in the centre of the frame. Partial metering is very similar to spot metering, but simply utilises a larger area. This mode is mostly found on Canon cameras.



ISTOCKPHOTO

BEST FOR: Subjects with dark or bright backgrounds



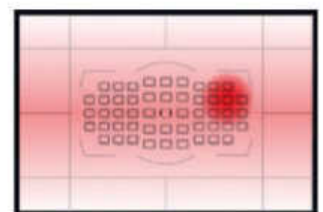
CENTRE-WEIGHTED/ AVERAGE METERING

Meters the whole frame, with bias towards the centre. On Nikons, this mode is called Centre-Weighted. Some Nikons also offer Average which averages across the whole frame.



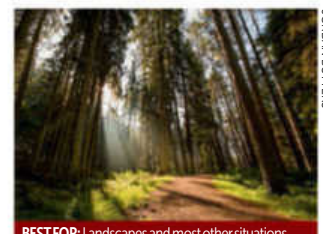
JORDAN BUTTERS

BEST FOR: Subjects placed in the centre of the frame



MULTI-ZONE METERING

Meters across the frame, with bias towards the area surrounding the active AF point. Canon calls it Evaluative, Nikon calls it Matrix. The frame is divided into zones and each is analysed and compared to give a reading.



JORDAN BUTTERS

BEST FOR: Landscapes and most other situations

IS THE WORLD SELFIE OBSESSED?

SELF-ABSORBED SNAPSHOTS STEAL CENTRE STAGE IN THE NEWS YET AGAIN



DAVID SLATER

● Macaque madness

Last year we reported on the crazy story of photographer David Slater who had entered into a copyright battle with Wikimedia over his 'macaque monkey selfie' image. While David's copyright battle is still ongoing, things have just taken an even more bizarre turn for the UK-based wildlife photographer. People for the Ethical Treatment of Animals (PETA) has recently filed a lawsuit against David in San Francisco, claiming that they believe the macaque is the legal copyright holder, so David shouldn't make money from the image – any proceeds from sales and licensing should go towards the monkey's wellbeing. The US Copyright Office states that it won't register copyright to animals, so claims David's image is therefore in the public domain. David still argues that as he set up the camera on a tripod and input the exposure settings, he's the legal copyright holder. We find all this monkey business is bananas. The case continues...



SHUTTERSTOCK

● You're gonna need a bigger boat

We've yet to be awoken by nightmares of a narcissistic selfie-stick wielding crowd, converging on us to the score of the famous Jaws theme music, but here's something we've suspected for a while – selfies are now officially more deadly than shark attacks.

The website *Mashable* reports that, globally, there were 12 recorded deaths in 2015 that were directly linked to a person taking a selfie. In comparison, shark attacks claimed just eight lives over the same period. Causes of death while taking selfies include falling, being hit by a vehicle, posing near dangerous animals and nasty accidents involving loaded firearms. So rife is the problem in Russia that the government has even released an official guide to shooting 'safe selfies' in an attempt to quell the death toll.

With the arrival of this news we're now wondering how long it'll be before someone attempts the ultimate daredevil extreme – a selfie with a shark?



Wonderland funding

You may remember that we featured UK fine-art photographer Kirsty Mitchell's inspiring *Wonderland* series last year. Following on from the fantastic reception that Kirsty's work received, she has decided to put together a *Wonderland* book and has secured funding for the project via crowdfunding website Kickstarter.

Having set out with an initial target of £70,000, Kirsty smashed through her original goal in under ten hours, racking up £100,000 in the first day alone and becoming the most-funded photobook in Kickstarter history. At the time of writing, the project has raised more than £276,000 and is the most funded Kickstarter photography project ever! Speaking of her success, Kirsty said:

"I walked away from two major publishing contracts to produce my own book – this Kickstarter has been the hardest thing I have ever done. I have never been more stressed and scared about a decision, and having to learn about publishing and finding my own designer was a mountain to climb. But now it's underway, I am relieved I took the risk." The campaign has now finished, but if you're lucky Kirsty may still have a few remaining copies of the limited-edition book for sale on her website.

kirstymitchellphotography.com



NEW GEAR REVOLUTION

CANON HAS UNVEILED plans for some ambitious products to hit the shelves in the not-too-distant future – an indication of the imaging giant's continuing investment in progressing technology.

Not quite up to speed on 4K yet? You'd best hurry up, as Canon is developing a Cinema EOS System camera that outputs footage at 8K – that's 4.5x the resolution of 4K and 16 times more detailed than Full HD! It will be equipped with a Canon Super 35mm-equivalent CMOS sensor that will record 8K at 60 frames-per-second with 13 stops of dynamic range! Canon has also announced an 8K reference display to go alongside the new camera too.

If stills are more your thing then how about this: also in the pipeline is a 120-megapixel DSLR! The new camera will incorporate a Canon-developed high-pixel-density CMOS sensor within the current EOS-series platform, similar to that used on the new EOS 5DS and EOS 5DS R. Canon has also indicated that it is developing an APS-H-size CMOS sensor (above) boasting approximately 250-million pixels (prototype camera, left) – the world's highest number of pixels for a sensor of this size. No it's not April 1st, so time will only tell where the resolution race will go next. www.canon.com.au



THE FUTURE OF THE CAMERA

WHAT SORT OF CAMERA WILL YOU BE HOLDING IN TEN YEARS TIME? PHOTOGRAPHER TIM BOOTH HAS SOME INTERESTING VIEWS TO SHARE...



"The move from film to digital has taken more than 15 years to get from crappy to pretty outstanding. In 2000 I still had all my film cameras, but took the tentative first step into

digital with a 2.7-megapixel Nikon D1, costing a little over \$2000 – it's laughable now; my phone offers better resolution.

"We've come a long way considering that Canon recently launched the EOS 5DS with a whopping 50-megapixels, and we'll be laughing at that in five years time. Of course it's not just about resolution, there are many other attributes to a digital camera (before we get into lenses) that have been hugely improved, such as dynamic range, colour handling and noise for a start.

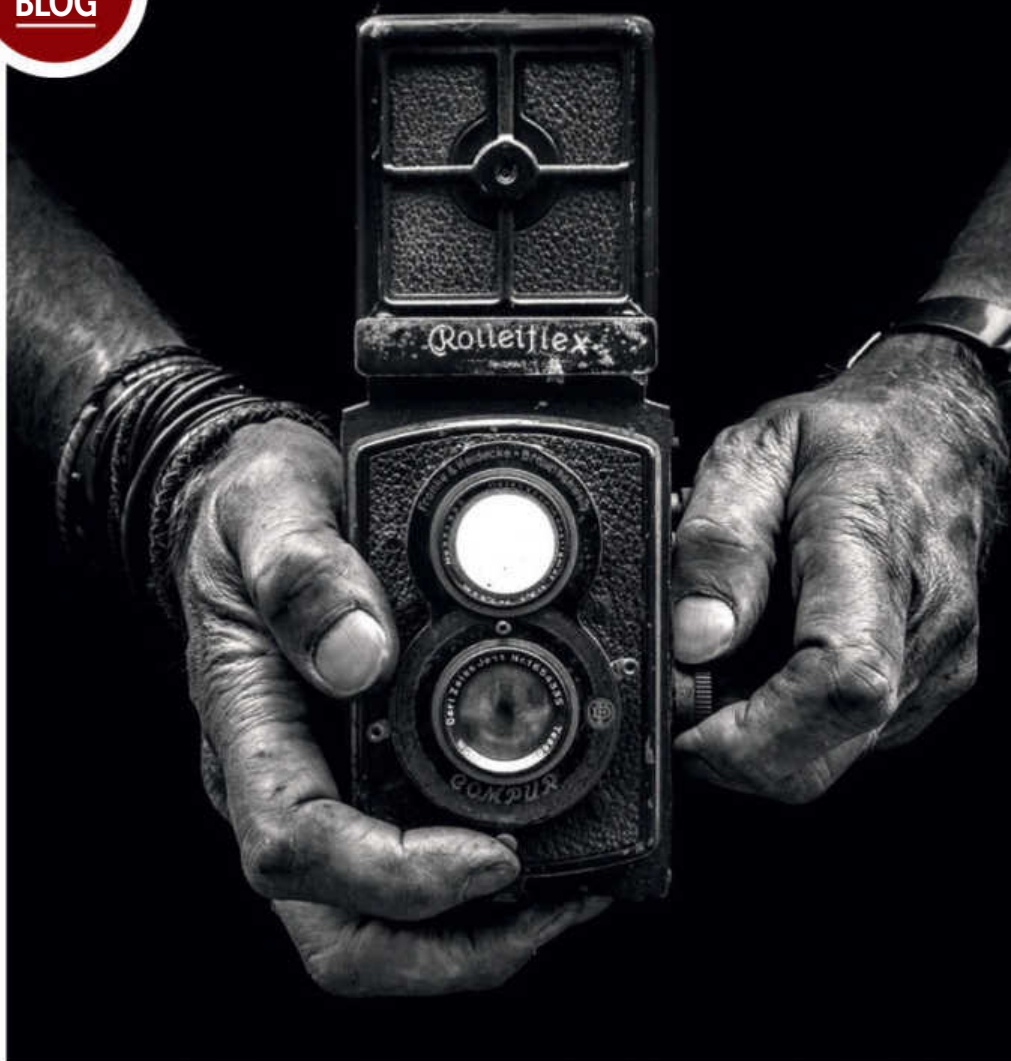
"However, the limit to what a camera can do, whatever its size and shape may be, is fairly, well, limitless. If Moore's Law is anything to go by then size will not limit resolution or processing ability in the slightest. You can see this is already happening, just look at how many photographers are moving from chunky DSLRs to CSCs, like the Fuji X-Series. This is the first very visible step away from the traditional SLR architecture to something more compact and portable.

"Back in the '80s you wouldn't have dreamed of shooting a job on 35mm. Medium-format was king. Aside from the quality, clients wanted to see you with lots of big kit, and to give them big trannies. Now it's perfectly acceptable to turn up at a shoot with a small camera. Aside of course from the convenience, it's a relief that a client's focus is now more on the result, which is actually what they're paying for, as opposed to the method of getting there.

"So cameras are getting better and smaller, which is great, but of course a camera is nothing without its lenses. Currently decent lenses cost a lot of money, which is no surprise considering what goes into making them. They also weigh a heck of a lot, burdened as they are with a tonne of beautiful but hefty glass. However glass will soon become antiquated, however beautiful it may be. Hey, don't shoot the messenger: I know that some lenses seem to be quite magical, and we all have our favourites, but all they are doing is transferring and focusing light in a particular way. At the moment we can only do that with exquisitely-shaped biconvex lenses, but the time is fast approaching when we might not need glass at all, and indeed we're almost there.

"Engineers at the University of British Columbia are working on a flat spray-on lens technology as we speak. It's not quite

GUEST
BLOG



“SO CAMERAS ARE GETTING BETTER AND SMALLER, WHICH IS GREAT, BUT OF COURSE A CAMERA IS NOTHING WITHOUT A LENS. CURRENTLY DECENT LENSES COST A LOT OF MONEY”

there yet, but I can easily imagine a future where lenses as we know them now will cease to exist in any practical sense. If you need a Canon 80mm f/1.2 then you select that on your camera and the 'lens', or polymer film, whatever it might be, will replicate, exactly, not just kind of, but exactly, that lens. Switch to a Carl Zeiss 21mm instantly, or to a 600mm f/2.8. Of course mentioning their f/stops is rather antiquated too as we won't really be restricted by those either – as we're not using glass anymore. Maybe they'll even use a more advanced version of what Lytro are up to, where you can decide on your point of focus and depth-of-field after the fact.

"This all may sound too much like science fiction to be believable, but the science is nearly there. And it's not a question of making the images dynamic with software, they'll actually be that dynamic in Raw data form. Us purists wouldn't want the camera or its 'lens' mucking about with the picture if at all possible, now would we?

"So what will you be holding in your hand in 2025? It's pure guesswork of course, but it won't look anything like a DSLR and you won't be weighed down by a clutch of lenses. The camera will be small, it will be light, it will be immeasurably superior in its ability than anything available today, and you will be able to take an enormous range of very high-end images with just one little device. Will traditional camera manufacturers be able to keep up? My guess is probably not. If Canon, Nikon, Fujifilm and Sony (et al) don't undergo a radical change of thinking, and more or less re-invent the face (not the art) of photography, they'll inevitably get left behind.

"I for one can't wait. Sure, I love the reassuring heft of my camera and I love the craft of my lenses, but all I'm really interested in is the result. If I can hold a 500-megapixel camera with any lens I require, noiseless, with multiple built-in optically perfect filters, all in the palm of my hand, then I'll be a happy man." www.timbooth.com

Your gallery

WORKS OF ART FROM THE DIGITAL PHOTOGRAPHY COMMUNITY



WINNER!

Paris by Jared Morgan

"I took this along the Seine River in Paris in April 2015 using a Nikon D7100 and Sigma 17-50mm f2.8 lens, then manually blended three bracketed shots and cross-processed and toned the resulting image in Lightroom and Photoshop."

WIN!

Congratulations to Jared, who has won a Lowepro Whistler BP 450AW pack (\$575, lowepro.com/whistler) for the wonderful 'Paris' – all thanks to **Maxwell International Australia** (www.maxwell.com.au)





RUNNER-UP

Jordan by Roger Lee

"I took this during a tour of Jordan in 2013. One of the issues with tours is we don't have the time to head out early morning or late afternoon to catch that perfect light. But I was lucky enough to get some cloud cover to even out this exposure. With a bit of dodge and burning, we came out with an amazing shot."



RUNNER-UP

I wanted well done

by Evan Jeffery

"I shot this in an inner Melbourne lane using a Nikon D800 and Sigma 35mm f1.4 lens at 1/80sec f1.4 using three studio heads and one SB910 flash."



RUNNER-UP

2:05 by Steve Sumpton

"This is from a series I'm working on that puts the spotlight on the 205 children in high-security immigration detention centres in Nauru and mainland Australia, and poses the question, 'What does time mean for these children?' As I wasn't able to photograph the children, I took a more creative approach that I feel gives the project a more unique voice."



RUNNER-UP

Ultimate Annapurna

by Jonathan Adibrando

"I took this at sunset after a six-hour trek to Kopra Ridge in Nepal and from that vantage point you can see Mount Dhaulagiri (7th highest) and Mount Annapurna (10th highest) in their full glory. Locals had been moving up and down the ridge to help build an eco-lodge and I thought that they would make a really good foreground interest with Mount Dhaulagiri as a great background."



RUNNER-UP

A Galaxy Far, Far Away

by Ben Maze

"I went outside our motorhome at about 11:00pm to see the late clouds had cleared and the night sky was filled with stars. I quickly headed down to the beach to take some shots, and was amazed at just how clear the sky was, and how many stars I could see. I spent the next hour running around the sand and the boulders in the dark, trying to capture this beauty that not many people see.

This shot shows the mysterious boulders underneath a blanket of stars, as if they had come from a galaxy far, far away."



SUBMIT YOUR IMAGES!

Think you've got what it takes to make the **Digital Photography gallery**? Whether you're a pro or an amateur, email pics to editor@dpmagazine.com.au for your chance to win. Each issue, we're giving away one Lowepro Whistler BP 450AW pack (\$575, lowepro.com/whistler), plus super-cool Ultrafit Sling Straps from Joby (\$55 each, joby.com). You can enter as often as you like. Good luck!

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Check us out online at facebook.com/digitalphotographymag & on Twitter @DPMagAustralia





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